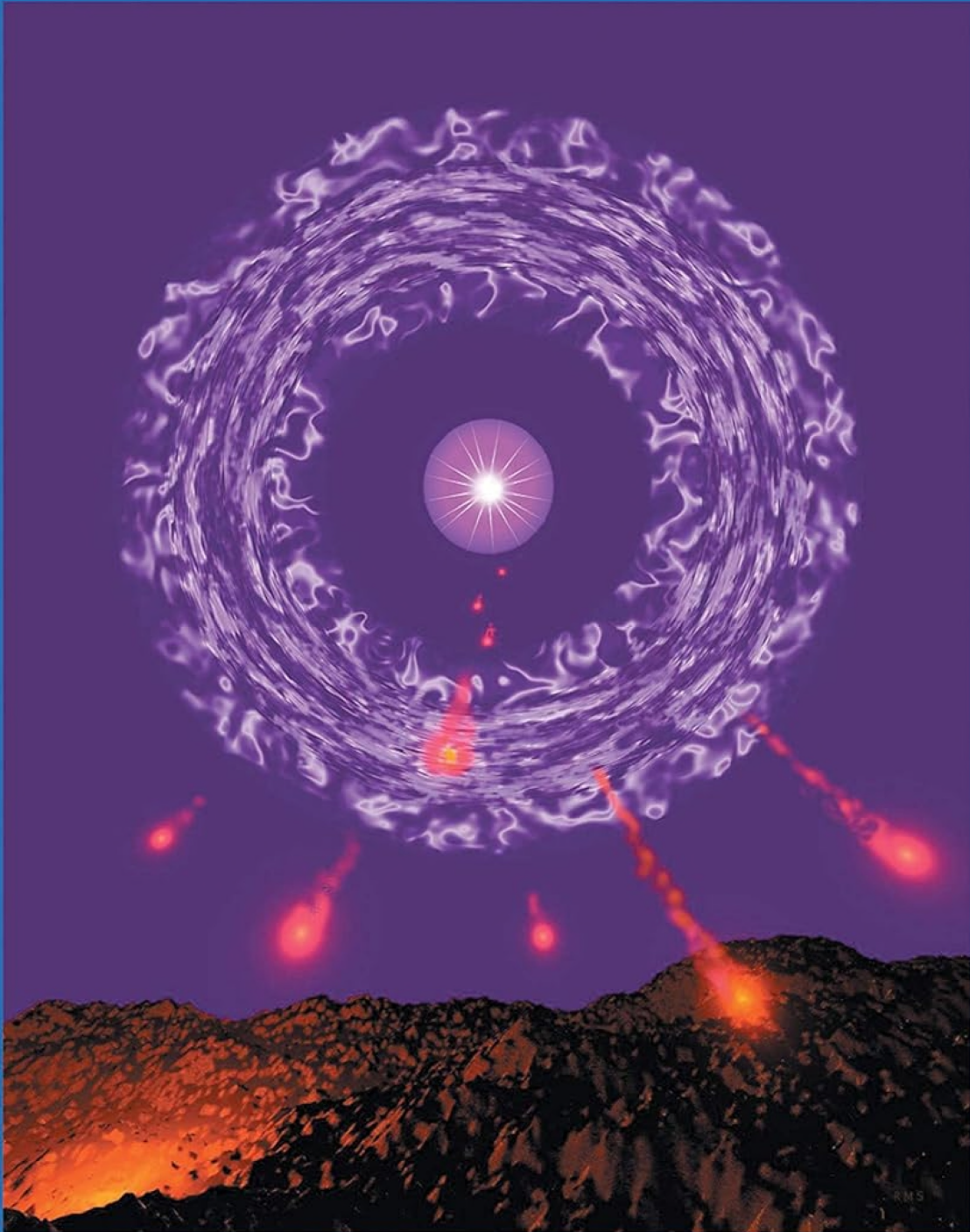


# METAMORPHIC STAR



DUARDO CARDONA

# **Metamorphic Star**

**Dwardu Cardona**

**Mikamar Publishing  
Oregon  
2011**



By the same author:

***God Star***  
(2006)

“Once I had *God Star* in my hands I could scarcely put it down. This is the most complete and articulate book on the topic I have read. It is a complete history...of the nature of an intense plasma occurrence in the Solar System as it once was at a time when mankind was present to record it...*God Star* delineates mythology from fable, setting the former as a true field of scientific enquiry. From *God Star* springs forth topic after topic on the physical conditions and processes our planet has undergone...”

Anthony L. Peratt, B.S.E.E., M.S.E.E., Ph.D  
(Former Scientific Advisor, United States Department of Energy)

***Flare Star***  
(2007)

“*Flare Star* is essential reading for anyone interested in geology, archaeology, paleontology, and/or the recent history of the Solar System. Cardona correlates information from astronomers, geologists, plasma scientists, and from comparative mythologists to demonstrate that they use different methods but come to many similar conclusions. He notes several known problems in science that are not often stressed outside the scientific community and then provides possible explanations to said problems with one basic assumption concerning the original plasma environment around Earth...Although Cardona’s *God Star* was first in the series...a reader would not be lost starting with *Flare Star*. They compliment each other and both are very important books.”

C. J. Ransom, Ph.D  
(Plasma Physicist, University of Texas at Austin)

***Primordial Star***  
(2008)

“Cardona’s work explains so many of the mysteries and anomalies of planetary science and history in a coherent and logical model. It seems that plasma and electromagnetism probably hold the key to our past as well as our future, and that the history of this planet is nothing like that portrayed by conventional wisdom. I can’t recommend this book strongly enough.”

David Drew  
(Book reviewer—London—England)

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# PART ONE

# Chapter 1

## Mythohistory

### THE COSMIC PAST

To an extent, what will be discussed in Part One of this book will be fairly new to those who have perused my earlier works on Earth's proto-Saturnian past. In a more general way, however, I will be taking the reader over the same ground I had covered in my previous volumes, even if I shall be doing so by traveling along different paths. There are two different reasons why this is believed to be necessary.

First of all, I wish to keep my readers up to date with new discoveries in the hard sciences, many of which continue to bolster the diverse suppositions I have been presenting these many years.

Secondly, I feel obliged to clarify certain issues which have been raised by others and to resolve certain objections that have been leveled at my work since the publication of my first three volumes.

One major objection that has been leveled at the prequels to this work is that, despite the evidence we presented from the hard sciences, the scenario we have so far constructed is really based on nothing but mythology. It is not that we have made a secret of this and, in fact, we stressed it at the very beginning of our discourse.<sup>1</sup> In no way have I evaded the ambiguous, sometimes even contradictory, content of mythology. Nor will I do so, since mythology is anything but an open book. As Max Müller, one of the most influential mythologists of the nineteenth century, admitted, "everybody who has ever thought or written on mythology has freely admitted that mythology requires an explanation."<sup>2</sup> It thus seems that, once again, it is necessary to point out what it was that led to the formulation of the world's mythological themes, which is not itself a question that has been satisfactorily answered by mythologists. As we had formerly pointed out,<sup>3</sup> mythological texts can contain so many convoluted themes that mythologists often despair of making sense out of any of them. "What," for instance, asked Paul Veyne, "is to be made of this mass of nonsense?"<sup>4</sup>

"How can all this [he went on] have a meaning, a motivation, a function, or at least a structure? The question of whether myths have an authentic content can never be put in positive terms."<sup>5</sup>

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<sup>1</sup> D. Cardona, *God Star* (Victoria, British Columbia, 2006)—henceforth simply *God Star*—pp. 1 ff.

<sup>2</sup> M. Müller, *Chips from a German Workshop* (N. Y., 1870), p. 155.

<sup>3</sup> *God Star*, pp. 20 ff.

<sup>4</sup> P. Veyne, *Did the Greeks Believe in their Myths?* (Chicago, 1988), p. 2.

<sup>5</sup> *Ibid.*

This had been the attitude of some of the best mythologists from just about day one. Despite his Euhemerism, to which we shall come anon, Antoine Banier was still of the belief that quite an assortment of these myths were just plain nonsense devoid of meaning.<sup>1</sup> “Although later poets may have given to some of these fables a charm of beauty,” Müller himself wrote, “it is impossible to conceal the fact that, taken by themselves, and in their literal meaning, most of these ancient myths are absurd and irrational.”<sup>2</sup> Müller then wonders who could have invented these stories and why. “Was there a period of temporary insanity, through which the human mind had to pass,” he asks, “and was it a madness identically the same in the south of India and in the north of Iceland?”<sup>3</sup>

Those of the Christian faith have always found it difficult to reconcile the world’s mythology with what passes for history in the pages of the Old Testament which they sequestered from the Jews. These often end up believing that myths are the “corrupted and misinterpreted fragments of a divine revelation” that was once granted to the whole of mankind.<sup>4</sup> But, as Müller rightly noted, this misconception can itself be classed as blasphemy.<sup>5</sup>

Where religion failed to make much sense of what the myths proclaimed, philosophy, especially in the form of metaphysics, stepped in to take its place by claiming that there is bound to be a deeper meaning in these mysterious tales. But what that deeper meaning is has eluded all philosophers as it continues to elude them to the present day.

“The myths,” Marinus van der Sluijs recently pointed out, “were doomed to attract ridicule and contempt until the day would come [when] scientists could piece them together and recover their meanings.”<sup>6</sup> But although he claims that *that* day “has now come,”<sup>7</sup> it has only come to a selective few.

It is not that scientific interest in mythology is anything new. But, in the past, other than as a means for explaining the origin of religion, the study of mythology by scientists remained mostly in the realm of psychology—concerning which Carl Gustav Jung comes immediately to mind. But before Jung there had been Sigmund Freud and, since then, we’ve been regaled by the likes of Joseph Campbell and Cottie Burland. What these individuals, as well as others, have preached in this respect is that the myths of our forefathers are nothing but the forceful echoes of a repressed collective unconscious. It is as if all over the world, at some unspecified, but primitive, time, all of our ancestors not only fell prone to the same mental stresses, but they all encoded it through near-identical symbolic themes which they all then managed to suppress. One saving grace of this erroneous belief, as van der Sluijs also pointed out, is that while its “overarching theory may be wrong,” much of the evidence it relies on “is still valuable and informative.”<sup>8</sup>

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<sup>1</sup> F. E. Manuel, *The Eighteenth Century Confronts the Gods* (Cambridge, Massachusetts, 1959), p. 106.

<sup>2</sup> M. Müller, *op. cit.*, p. 10.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, p. 12.

<sup>5</sup> *Ibid.*

<sup>6</sup> M. A. van der Sluijs, *The Mythology of the World Axis* (London, 2007), p. 84.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Idem*, “But What About Jung,” Picture of the Day on *thunderbolts.info* (July 9, 2008), p. 2.

And do not, for one second, even think that mythology is such a thing of the past that no one at present is the least bit interested in what it might all mean. “The more one learns about the myths, legends, and religions of the human race, the more imperative is the demand that one somehow make sense of them as a whole,” wrote Joscelyn Godwin not that long ago. “Their competing voice, their incompatible dogmas, call for the stern hand of a moderator who will bring meaning and unity to the whole assembly.”<sup>1</sup>

The meaning, of course, had always been there. It is the unity that was sundered and dispersed through humanity’s far-flung migrations. As David Talbott has been preaching for some time, myths will not easily surrender their meaning when investigated in isolation. The “essential requirement” for the proper investigation of myth, he tells us, is to assess “cross-cultural evidence.”<sup>2</sup>

“No one will ever penetrate to the original human experience by studying a local legend in North America or the South Pacific [he goes on]. But human testimony can be extraordinarily reliable in the hands of one attentive to the points of agreement—particularly where extraordinary and unexpected details are repeated around the world.”<sup>3</sup>

The “original human experience” that the mytho-historical record really reveals is what John Morgan referred to as “a world order believed to have preceded the present one.”<sup>4</sup> The only problem with Morgan’s definition is his belief that this previous “world order” did not involve “real events”<sup>5</sup>—an idea that also burdened the comparative work of Mircea Eliade.

Müller, on the other hand, could not quite accept that myths refer to “a past which was never present.”<sup>6</sup> Even so, he was adamant that mythology does not constitute philosophy, history, religion, or ethics.<sup>7</sup> But while one may quibble whether mythology *constitutes* any of the above, there is no doubt that its promulgation has easily lent itself to such disciplines.

Our main claim, however, is the one that, regardless of their personal adherence, few mythologists will accept as valid. Going against the strongest grain imaginable, what we proclaim is that mythology is mainly concerned with one of Müller’s disqualified subjects, and that is history—as long as it is understood that by history we refer to a *cosmic* past.

## THE DAWN OF ANTIQUITY

As Frank Dobbins noted over a century ago, if all copies of the Vedas were to be destroyed, they would still be orally preserved by the Brahmins as they have been for more than three thousand years.<sup>8</sup>

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<sup>1</sup> J. Godwin, *Arktos: The Polar Myth in Science, Symbolism, and Nazi Survival* (London, 1993), p. 141.

<sup>2</sup> D. Talbott, “The Origins of Doomsday Anxiety,” Picture of the Day on *thunderbolts.info* (Jan. 2, 2006), p. 3.

<sup>3</sup> *Ibid.*

<sup>4</sup> J. S. Morgan, *When the Morning Stars Sang Together* (Agincourt, Canada, 1974), p. xi.

<sup>5</sup> *Ibid.*

<sup>6</sup> M. Müller, *op. cit.*, pp. 12, 67, 140.

<sup>7</sup> *Ibid.*, pp. 140-141.

<sup>8</sup> F. S. Dobbins, *Error’s Chains: How Forged and Broken* (N. Y., 1884), p. 548.



To be sure, the dissemination of ancient lore had to have predated the invention of writing. And, despite my previous proclamations on this facet of my work,<sup>1</sup> this has also served as a bone of contention even among some of my sympathetic readers. The argument, of course, centers on the accuracy of such reports when repeated through generations down the ages before the advent of the written word. In certain cases, oral transmission continued to be the only manner of traditional preservation among people who knew nothing about writing until its introduction by modern colonizers. Even at present, Stone Age societies continue to inhabit certain parts of the world. The Amazon jungle is still occupied by several indigenous tribes that have never been contacted by modern outsiders.<sup>2</sup> How accurate could traditions from such tribes be?

That question can be answered by the Brahmins mentioned above. Members of this Hindu priestly caste are not only trained to memorize the entire Vedas, close to 450,000 words, through the time-tested technique of rote. They also serve as the ultimate judges when it comes to disputes about the texts. Were one to depend on written copies, according to these priests, mistakes are bound to be perpetuated. The oral rendition of a text, on the other hand, is not only retained through the succession of teachers and their pupils, but is also self-reliant since ambiguities can be clarified by the answering of questions.

It is not that I agree with much that Graham Hancock has been preaching these past years, but he knew what he was talking about when he wrote the following:

“Significantly there is no mention of writing in the *Rig Veda* [Graham Hancock noted]. Moreover, even when writing had become widespread in ancient Indian society for other purposes, strict proscriptions continued to be enforced against writing the *Vedas* down. This ban was respected until about 1000 years ago, from which period the earliest surviving written versions have reached us.”<sup>3</sup>

So, also, with the Homeric tales which, as the Harvard classicist Gregory Nagy shows, can no longer be seen as original poetry written by a single man. Rather, Nagy tells us, these epics bear the unmistakable signs of having been passed down orally through generations of *rhapsodes* “over a period lasting more than a thousand years.”<sup>4</sup> Actually, this revelation did not even require Nagy, as this had been known by other scholars since 1795,<sup>5</sup> if not even earlier.

The same was also true of the Celts who have been described as “notable orators” who “had a high regard for truth.”<sup>6</sup> Their bards, so Julius Caesar assured his readers, would spend as much as twenty years in memorizing poetry and other traditional lore.<sup>7</sup>

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<sup>1</sup> *God Star*, pp. 13 ff.

<sup>2</sup> P. Yam, “A Glimpse of the Past,” *Scientific American* (August 2008), p. 16.

<sup>3</sup> G. Hancock, *Underworld: The Mysterious Origins of Civilization* (N. Y., 2002), p. 95; see also G. L. Possehl, *Indus Age: The Beginnings* (Pennsylvania, 1999), pp. 7-8.

<sup>4</sup> G. Nagy in an interview conducted by J. Meinhardt for *Archaeology Odyssey* (May/June 2004), p. 26.

<sup>5</sup> *Ibid.*, p. 34.

<sup>6</sup> S. Eddy & C. Hamilton, *Celtic Myths* (London, 2001), p. 3.

<sup>7</sup> *Ibid.*



**Julius Caesar who had it recorded that Celtic bards  
would spend as much as twenty years in memorizing poetry  
and other traditional lore.  
(Illustration by Charles Hogarth.)**

"It may be difficult for us, in a text-based culture, to conceive of and understand an oral culture," wrote Ben Witherington III not that long ago, "much less how sacred texts function in such a culture."<sup>1</sup>

"So far as we can tell [Witherington went on], no documents in antiquity were intended for 'silent' reading, and only a few were intended for private individuals to read. Ancient documents were always meant to be read out loud, and usually read out loud to a group of people."<sup>2</sup>

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<sup>1</sup> B. Witherington III, "Sacred Texts in an Oral Culture: How Did They Function?" *Biblical Archaeology Review* (November/December 2007), p.28.

<sup>2</sup> *Ibid.*

Up to that point, questions could still have been asked, as they probably were, by the spectators, but, as time went by, there were less answers to be had simply because orators needed only to learn how to read and not necessarily how to remember.

Although Frank Manuel did not have our particular study in mind—how could he have?—he nevertheless understood the danger inherent in reducing mythology to the written word, as the following makes quite clear:

“Had we received the myths intact in their early form we would have recognized [their] truth immediately, but the original myths have been so distorted by later writers that they have often become mere latter-day artistic fancies and have almost lost their worth as reflections of the primitive world. But for all that, myths still preserve the ‘nobility and the worth’ of the early dawn of antiquity and they can inspire those who know how to fathom their meaning.”<sup>1</sup>

## GEOMYTHOLOGY

Early in the twenty-first century, geologists began to take a renewed interest in local legends and, to an extent, even mythology. The trail had actually been blazed earlier, in 1973, by Dorothy Vitaliano.<sup>2</sup> But, as frequently transpires, what is old often becomes new again.

Personally, I cannot think of a particular study that can be said to have regenerated interest in what has become known as geomythology. For whatever reason—and more than one has been suggested—it seems as if various interested parties, mostly geologists, suddenly decided to take once-dismissed folklore rather seriously. This was made quite clear in a paper published by Kevin Krajick in 2005.<sup>3</sup> Quite a few investigators are given prominence in that article. Needless to say, most of them are mainly concerned with those legends which, in Krajick’s words, seem to “encode valuable data about earthquakes, volcanoes, tsunamis, and other stirrings of the earth.”<sup>4</sup> And, sure enough, Amerindian folk tales did not take long in leading to the discovery of past geologic disturbances along fault lines, including landslides and other signs of seismic violence, in the region of Seattle in the state of Washington.<sup>5</sup> Matching such traditions with the regions in which they had originally risen is even allowing geologists to pinpoint hidden seismic hazards, thus permitting them to keep a scientific watchful eye on their possible recurrence.

Despite all that, it might as well be said that, in the main, this new breed of geoscientists are really stretching things a bit. Take, for instance, the fund from the French government that Patrick Nunn managed to obtain in order to study South Pacific folklore in the hope that this would prove beneficial in pin-pointing those islands which may lie in hazard’s way.<sup>6</sup> Since the

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<sup>1</sup> F. E. Manuel, *op. cit.*, p. 302.

<sup>2</sup> D. B. Vitaliano, *Legends of the Earth: Their Geologic Origins* (Indiana University Press, 1973).

<sup>3</sup> K. Krajick, “Tracking Myth to Geological Reality,” *Science* (November 4, 2005), pp. 762-764.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

South Pacific islands have always been prone to earthquakes and volcanic eruptions, in what way would the study of their indigenous lore add to what is already geologically known? Does one really need the tales concerning the fishing up of islands by Polynesian deities, who are also said to have sometimes flung them back into the ocean, in order to confirm that certain isles are actually known to have suddenly risen and then sank? What such tales are good enough to tell us is that the natives of these islands had witnessed such upheavals with their own eyes. Nunn claims to have “correlated at least a half-dozen stories with actual land masses seen by early European seafarers but which are now gone,” a few of which “were never charted but have since been located just under the waves, exactly where the stories said they were.”<sup>1</sup>

Strange as it may sound, this continues to occur. Such an island suddenly rose, and was photographed, in the South Pacific in August of 2006. By December, much of the risen land had already been eroded. And by the following year it completely disappeared.<sup>2</sup> Nor is the South Pacific the only ocean in which islands have been known to surface only to just as suddenly disappear beneath the waves. The Atlantic has been just as notorious in this respect.<sup>3</sup>

So, likewise, with the tales of “haunted lakes that rise, sink, or blow up” in various regions of Africa which were then linked to gas buildups in landlocked waters which “explode” to release toxic levels of carbon dioxide.<sup>4</sup> Once again, this had already been known through the 1986 explosive outbreak of Lake Nios in Cameroon, an event that claimed the lives of 1700 unfortunate tribesmen living in the area.<sup>5</sup>

Given that those islands which suddenly surface in the middle of our vast oceans all happen to be volcanic, it should not be surprising that volcanoes can also suddenly thrust upward through the land. One Fijian legend in particular tells of just such a sudden birth, but when the natives pointed to the mount in question, alleging it had actually been thrust into existence overnight, geologists countered with the claim that *they* knew it had long been dormant. Not so, it seems. The indicated volcano has now been found to be quite active.<sup>6</sup>

A similar, but modern, nativity, however, had already taken place in full view of an audience and even filmed. I am referring to Paricutin which came to life “unheralded out of level ground” in Mexico some 300 miles from Mexico City in 1943. Not entirely unlike the 1997 fictional movie, *Volcano*, it all started when smoke began to issue out of a furrowed field, the ground of which then began to shake and crack open. The tremor that followed right after that was violent enough to destroy part of a nearby village. Cinders, stones, rocks and lava were soon showering out of the ground and, by the following morning, a volcanic cone 25 feet high had marked the spot. One week later, the cone had risen to 500 feet. It reached 970 feet within

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<sup>1</sup> *Ibid.*

<sup>2</sup> J. Barone, “Birth of an Island,” *Discover* (August 2007), pp. 50-53.

<sup>3</sup> P. James, *The Sunken Kingdom* (London, 1995), p. 37.

<sup>4</sup> K. Krajick, *loc. cit.*

<sup>5</sup> N. Cooper & R. Marshall, “Cameroon’s Valley of Death,” *Newsweek* (September 8, 1986), pp. 26-28; S. Begley & J. Whitmore, “The Wrath of Lake Nios: How it Killed,” in *ibid.*, p. 28.

<sup>6</sup> R. McKie, “Ancient Legends Give an Early Warning of Modern Disasters,” *The Observer* (December 4, 2005).





**The South Pacific islands have always been prone to earthquakes and volcanic eruptions.**  
**Shown above: The discovery of Hawaii by Polynesian seafarers.**  
 (Painting courtesy of the Thomas A. Jaggar Museum, Hawaii—photograph by the author.)

two months, and 1,500 feet, with over three quarters of a mile in diameter, at the end of two years. The clouds of smoke and gas that erupted from it rose several miles into the atmosphere. Loud rumblings, which varied in frequency and intensity, were continuously emitted by the tormented ground. Flames were seen to flicker around the mountain's summit, with lightning and thunder adding to "the terrifying spectacle which brought sightseers and scientists from all over the world."<sup>1</sup> Nor was this the only such volcanic birth in modern times.<sup>2</sup>

One book that has given the new study of geomythology quite a boost was written by Elizabeth and Paul Barber.<sup>3</sup> The fact that it was reviewed favorably in *Science*, the sophisticated organ of the AAAS, did not hurt.<sup>4</sup> The book "provides an intellectually challenging and parsimonious new framework," this review informs us. "It not only sheds light on the planet's natural history but also offers alluring insights about human cognition."<sup>5</sup> But, as with similar

<sup>1</sup> L. Bertin, *et al.*, *The New Larousse Encyclopedia of the Earth* (London, 1972 revised edition), p. 151; see also pp. 153, 154, 158, 168.

<sup>2</sup> *Ibid.*, p. 151.

<sup>3</sup> E. W. Barber & P. T. Barber, *When They Severed Earth From Sky: How the Human Mind Shapes Myth* (Princeton University Press, 2005). Also of interest: D. B. Vitaliano, *et al.*, *Myth and Geology* (February 2007—special publication of the Geological Society, London).

<sup>4</sup> A. A. Baird, "Sifting Myths for Truths About Our World," *Science* (May 27, 2005), pp. 1261-1262.

<sup>5</sup> *Ibid.*

recent works, it only provides a new framework in relation to the newly advocated acceptance of myths and legends by geologists, because, in actual fact, the study itself goes all the way back through a long line of researchers to classical Greece.

### CELESTIAL DEBRIS

In the meantime, those who, like Victor Clube and Bill Napier, to say nothing of Immanuel Velikovsky, have attempted to connect myths to cometary- and/or meteoritic-induced catastrophes continue to meet with skepticism. Even Benny Peiser, who has long striven for the acceptance of myths as viable records of past terrestrial impacts, is now on record for believing that the “pendulum may have swung too far” in that direction. Now that geomythology is in vogue, he claims, too many scientists are invoking myth “left, right, and center.”<sup>1</sup> But not everybody sees it that way.

Geologists were not the only scientists who jumped on board this creaking wagon. Archaeologists, prime among them Bruce Masse, did not wish to be left out. After all, if bombardment from the sky had been rampant in the past, it must have left its telltale scars amid mankind’s accumulated strata. Masse was not exactly breaking news when he, too, suggested that “ancient myths...may depict actual celestial events.”<sup>2</sup>

A former U.S. Navy archaeologist who had been stationed in Hawaii, Masse commenced his new studies in that very State by dating native legends associated with the genealogies of historical Hawaiian chiefs. He then correlated this lore with past celestial events “such as auroral substorms, comets and solar eclipses.”<sup>3</sup> Never mind that knowledge of the link between auroras and solar substorms does not stretch that far back or that auroras are not normally visible from the latitude of Hawaii.

And the results? According to Masse himself: “Not only did the supernatural myths correspond completely with known celestial events, but they also preserved verifiable descriptive details, such as the occurrence’s shape, size and timing.”<sup>4</sup> Moreover, still according to Masse:

“In South America alone, several myths describe the sky, the sun or the moon falling and causing ‘world fires.’ The myths’ geographical distribution corresponds to historic locations where meteorites hit and probably ignited widespread grassland and dry-land forest fires, decimating parts of the local population.”<sup>5</sup>

“Western science,” Masse rightfully charges, “has failed to appreciate the power of myths.”<sup>6</sup> But despite the courage he has exhibited in his new endeavor, he has, with others, unfortunately managed to trivialize the very subject he has been studying by looking at it too narrow-mindedly.

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<sup>1</sup> K. Krajick, *loc. cit.*

<sup>2</sup> B. Kent, “Was Chicken Little Right?” *Los Alamos Newsletter* (December 6, 2004), p. 8.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

Masse aside, there are quite a few scientists who now view the fall of meteorites and debris from shattered comets as having brought down the world's first civilizations. A newly discovered landform which has been interpreted as a possible crater in Iraq—that is, ancient Mesopotamia—is now believed to provide one of the smoking guns. This is then augmented by ancient texts from that very civilization which preserve accounts of “stars” falling from the sky. And while climate change is also being utilized as one of the new reasons behind the fall of ancient nations, this, too, is now being associated with catastrophic “heavenly happenstance.” Since droughts, volcanoes, and earthquakes do not seem to have been violent enough to do the job, comets have been charged as the likely culprits.<sup>1</sup>

“One or more devastating impacts could have rocked the planet, chilled the air, and created unthinkable tsunamis...Showers of debris wafting through space...would have blocked the Sun and delivered horrific rains of fire to Earth for years.”<sup>2</sup>

Such events, Napier opined, “would surely be incorporated into the world view of people in the Near East at that time and be handed down through the generations in the form of celestial myths.”<sup>3</sup> But, as others have rightly asked, “could a single impact” of the size proposed “take down civilizations on three continents?” And the answer from most experts is “no way.”<sup>4</sup>

To his credit, Napier himself has long opted for *multiple* impacts,<sup>5</sup> but even that is not enough to save his day. That this theorizing is all awry is evidenced by the fact that the myths culled in favor of this particular scenario happen to date from *before* the collapse of the cultures in question. But let that be for now.

Dee Berger, a microscopist, and her colleagues were more interested in the tiny grains that came to Drexel University all the way from the bottom of the sea off the Gulf of Carpenteria in northern Australia. To Berger and her colleagues, these grains contain the signature of a cometary fragment that crashed to Earth sometime in the first millennium A.D.—much too recent to have provided the stuff of myth. And yet, as catastrophic as such an event might have been, Berger and company claim, it was not a unique occurrence. “By comparing the historical and archaeological records with hard-to-prove physical evidence,” wrote Faye Flam, “they are trying to make a case that rocks from space were responsible for altering human affairs in ways so huge that some have entered mythology.”<sup>6</sup>

Together with Dallas Abbott, the marine geophysicist who brought the Carpenteria samples to her, and a few other colleagues, Berger is involved in the Holocene Impact Working Group at Drexel University, who have been “proposing for years that several large objects

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<sup>1</sup> R. Britt, “Comets, Meteors & Myth: New Evidence for Toppled Civilizations and Biblical Tales,” *Space.com* (November 13, 2007), pp. 1-3.

<sup>2</sup> *Ibid.*, p. 3.

<sup>3</sup> *Ibid.*, p. 4.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> F. Flam, “Out of the Blue,” *The Philadelphia Inquirer* at *philly.com* (April 7, 2008), p.1.



from space hit the earth with enough force to influence global climate within human history.” Abbott herself estimates that this has transpired “perhaps five times in the last 6,000 years.”<sup>1</sup>

Abbott hopes that her and Berger’s work will produce enough evidence to “back up an idea promoted by a minority of British astronomers” who claim that “a few thousand years ago a massive comet swung inward from the fringes of the solar system, broke up near the Earth—and has been periodically dropping pieces on the planet ever since.” Although they are not named in the article being quoted, Abbott is, of course, referring to Clube and Napier. “What’s left [of this massive cosmic body], these astronomers proposed,” Abbott goes on “is now called Comet Encke—a tiny chunk of ice and dirt that orbits the sun every three years.”<sup>2</sup>

Although he is not the only one, David Morrison, a planetary scientist at NASA’s Ames Research Center, does not quite agree. Encke is “a little dinky comet,” he has rightly pointed out. If it had once been big enough to cause all the destructions it has recently been blamed for, he went on, it has sure aged—that is, diminished—quite fast.<sup>3</sup> But then, how fast *is* fast?

### SKY FALLS

It is not that cosmic debris should not be included in any study concerned with man’s mytho-historical record since stony, as well as metallic, bits and pieces that have fallen from the sky have long been venerated as divine. Adding to what we have already tabulated elsewhere,<sup>4</sup> we can point to the cave at Pessinus, in Phrygia, that served as the great center of worship dedicated to the goddess Rhea. It was there that what has been touted as the oldest image of the goddess was worshipped in the form of a stone that was believed to have fallen from heaven.<sup>5</sup> So, likewise, concerning what is believed to be the oldest sanctuary dedicated to the Graces at Orchomenus which contained what were considered images of them “in the form of rude stones” which were also supposed to have fallen from the sky.<sup>6</sup>

In fact, long before the production of iron through smelting, ancient man was already fashioning objects out of meteoric iron. Scarce as it might have been—though not as rare as we would like to think—the celestial origin of the metal was well known, as is evidenced by the names it was given. To the Egyptians it was a “stone of heaven” or a stone “produced by heaven.”<sup>7</sup> Egyptian tools made from this metal, which was considered magical,<sup>8</sup> were thus restricted to ritualistic use.<sup>9</sup>

“The oldest Sumerian word designating iron meant ‘sky’ and ‘fire’ [Edwin Krupp informs us]. Together the words suggest the ‘celestial lightning’ of a meteor. First in the ancient Near East to use weapons made extensively from smelted terrestrial iron, the

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, p. 2.

<sup>3</sup> *Ibid.*

<sup>4</sup> *God Star*, pp. 77 ff.

<sup>5</sup> A. S. Murray, *Manual of Mythology* (N. Y., 1950), p. 35.

<sup>6</sup> *Ibid.*, p. 197.

<sup>7</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 108.

<sup>8</sup> D. A. Mackenzie, *Egyptian Myth and Legend* (N. Y., 1923/1980), pp. 230-231.

<sup>9</sup> K. Moss, “The Opening of the Mouth Ritual—Part I,” *AEON* VI:4 (August 2003), pp. 81, 82.



**Rhea — whose oldest image was a stone that was believed to have fallen from heaven.**

Hittites still called the metal ‘fire from heaven.’ Iron, they said, originated in the sky, unlike copper and gold, whose sources were known to be terrestrial. The Assyrians, too, extracted iron from ore, but they said it was ‘fragment from heaven,’ and for them, the very ‘walls of heaven’ — the sky — were made of iron.”<sup>1</sup>

As early as the 5th century B.C., the Greek philosopher Anaxagoras already held that stones periodically fell to Earth from heaven above.<sup>2</sup> According to Gaius Plinius Secundus,

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<sup>1</sup> E. C. Krupp, *op. cit.*, pp. 108-109.

<sup>2</sup> C. Ginenthal, “The Aristotelian Cosmos,” *The Velikovskian* V:1 (2000), p. 9.

the Roman historian usually referred to as Pliny the Elder, who wrote sometime between A.D. 23 and 79, a stone as big as a wagon and of a burned odor fell in Thrace near Aegospotami in broad daylight. The event was also mentioned by Plutarch. And although Aristotle was of the belief that the stone in question had been lifted by the wind, Plutarch did not quite believe it. Pliny himself was quite aware that, occasionally, stones did fall from the sky.<sup>1</sup> And not only stones, but also iron like the lump that fell at Lucania in 54 B.C.<sup>2</sup>

Meteorites were even known to have originated in heaven by various so-called primitive tribes. The Australian Aborigines and the Maoris of New Zealand both possessed oral traditions of "strange rocks falling from the sky," sometimes even "causing awful fires and many deaths."<sup>3</sup> To the Huichol tribes of Mexico's Sierra Madre, meteorites were stars that sometimes fell and got broken against rocks,<sup>4</sup> although they also believed them to be arrows shot by deities.<sup>5</sup>

As is often said of God, however, science works in very mysterious ways. Just as it had forbidden bees to fly until the year 2000,<sup>6</sup> and continents to drift until 1958,<sup>7</sup> so did it forbid stones to fall from heaven until 1803 when so many of the damned things landed here on Earth that astronomers had no recourse but to accept their reality.<sup>8</sup> Having been exorcised in astronomy's early career, meteors were finally blessed and re-sanctified for study.<sup>9</sup>

The question then boils down to this: If our ancient ancestors, as well as primitive societies, could have been so truthful and so accurate when it came to these heavenly bolides, should we not also consider what else they had to say when it comes to other cosmic themes?

## ASTRAL MYTHS

That most myths have a common origin has been testified by many a mythologist. But most of those who have accepted this verity have done so through a misconception. Although not all of these scholars do so, the majority of them tend to believe that myths spread via diffusion as they passed from one people to another through trading and colonizing contacts.

Alexander Murray was not quite happy with this broad generalization. Referring back to the same Hindu Vedas that Müller had also used in his cogent arguments, he criticized all those who had till then supposed that the myths of the ancient Europeans were *derived* from those of the Hindus.<sup>10</sup> His own explanation was that the languages spoken by these European nations were "modifications" of a primitive Aryan tongue that was spoken by a previous race

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<sup>1</sup> J. G. Burke, *Cosmic Debris: Meteorites in History* (Berkeley, California, 1906), pp. 11-12.

<sup>2</sup> J. S. Lewis, *Rain of Iron and Ice* (N. Y., 1996), p. 14.

<sup>3</sup> D. Steel, *Rogue Asteroids and Doomsday Comets* (N. Y., 1995), p. 155.

<sup>4</sup> C. Lumholtz, "Symbolism of the Huichol Indians," *Memoirs of the American Museum of Natural History*, Vol. III (May 1900), p. 58.

<sup>5</sup> *Ibid.*, p. 83

<sup>6</sup> R. Kunzig, "What's the Buzz? The Physics of...Insect Flight," *Discover* (April 2000), pp. 27-28.

<sup>7</sup> *God Star*, p. 392.

<sup>8</sup> See *ibid.*, pp.82-83 for a fuller exposition.

<sup>9</sup> E. C. Krupp, "Hands-On," *Sky & Telescope* (April 2003), pp. 86-88; see also *God Star*, pp. 82-83 for a fuller discussion.

<sup>10</sup> A. S. Murray, *op. cit.*, p. 376.

before it branched away from its original home—"wherever that may have been"—to form new nationalities. And, in so branching, this previous race would also have distributed "modifications" of its original myths.<sup>1</sup> But that, too, would have been diffusion.

What Murray described is what is now known as the Indo-European language and its dispersal—all of which is not all that different from what Müller himself had adduced in the previous century.<sup>2</sup> But this does not explain comparative myths which cannot be traced to an Indo-European source.

How, for instance, did the core of some Semitic myths become mirrored in Egyptian ones, or why do we find identical assertions in the core meaning of some Egyptian and Mesoamerican beliefs half a world away?<sup>3</sup> One prominent mythologist who has gone out of his way to point out the problems inherent in the diffusion theory is Marc Stengel,<sup>4</sup> but even he did not reach far enough.

It has also long been recognized that, in the main, mythology is actually concerned with cosmic bodies. Despite what we have stated in the previous section, however, most of the bodies in question had nothing to do with meteorites and comets. Thus, even though Hugo Winckler favored diffusion, the astral nature of the mytho-historical record did not escape him. But since ancient astronomical knowledge was "most developed" in Babylon, Winckler concluded that all such information in the western world must have been derived from there.<sup>5</sup>

It has in fact long been established that the majority of Egyptian myths are cosmic in origin.<sup>6</sup> Not only did the ancient Egyptians exhibit an interest in the stars as a practical means for determining times and seasons, their religion was itself based on stellar lore.<sup>7</sup> Many passages in the famed Pyramid Texts actually relate to the worship of heavenly bodies.<sup>8</sup> Did Egyptian mythology derive from Babylon?

What about Buddhism, a religion that has additionally involved itself in the veneration of the constellations as well as of the planets?<sup>9</sup> Were these beliefs also borrowed from Babylon?

Did the primitive tribes of Africa—whose religious rites, myths, legends, folktales, proverbs, rhymes, songs, games, dances, arts, and crafts all trace to astral motifs<sup>10</sup>—follow suit?

And what, then, of Mesoamerica in Earth's opposing hemisphere? Are not scholars agreed on the astral nature of Mesoamerican religion.<sup>11</sup> True enough, Linda Schele, if no other did toy with the idea that this astral lore could have come with the first people to cross

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<sup>1</sup> *Ibid.*

<sup>2</sup> M. Müller, *op. cit.*, p. 16.

<sup>3</sup> See *God Star*, pp. 35 ff.

<sup>4</sup> M. S. Stengel, "The Diffusionists Have Landed," *Atlantic Monthly* (January 2000).

<sup>5</sup> A. de Waal Malefijt, *Images of Man: A History of Anthropological Thought* (N. Y., 1979), p. 162.

<sup>6</sup> J. B. Bury, *et al* (Editors), *The Cambridge Ancient History*, Vol. I (Cambridge, 1923), p. 331.

<sup>7</sup> R. O. Faulkner, "The King and the Star-religion in the Pyramid Texts," *Journal of Near Eastern Studies*, 25 (1966), p. 153.

<sup>8</sup> E. A. W. Budge, *From Fetish to God in Ancient Egypt* (N. Y., 1934/1988), p. 51.

<sup>9</sup> P. Niyogi, *Buddhist Divinities* (New Delhi, India, 2001), p. 85.

<sup>10</sup> W. R. Blake, "Afro-American Skylore Studied," *Astronomy* (January 1979), p. 58.

<sup>11</sup> S. Milbrath, "Astronomical Imagery in the Serpent Sequences of the Madrid Codex," in A. Aveni, *Archaeoastronomy in Pre-Columbian America* (University of Texas, 1980), p. 263.





The Maoris of New Zealand, shown here in modern ceremonial mock-combat, had long possessed oral traditions of “strange rocks falling from the sky.”  
(Photograph by the author.)



into America via the much disputed Bering Straits.<sup>1</sup> But, even according to her, this would have transpired somewhere around 20,000 to 10,000 years ago,<sup>2</sup> much too early for the lore in question to have been borrowed from the Babylonian civilization.

While there is no question that *some* diffusion of ideas would have taken place, it is much more probable that the world's astral mythology derived from a series of events which, being cosmic in nature, would have been understandably witnessed by all ancient races in the same celestial locality, high above in the sky. But what could these cosmic events have been?

Marinus van der Sluijs speaks of "the recent proposal" that it was "glowing plasmas" in the sky that "formed the impetus" to the making of early myths.<sup>3</sup> But even though we, too, have accepted the unfurling of glowing plasmas to account for diverse apparitions that ancient man saw projected against the sky,<sup>4</sup> at best this only touches on a partial facet of the world's mythology. Van der Sluijs has gone on record in trivializing the role of planets in mythology,<sup>5</sup> although he does accept "the profound" astral nature of the deities.<sup>6</sup> As our own postulate, on the contrary, indicates, it is the very origin and transformation of planets that really lies at the basis of the mytho-historical record.

## DIVINITIES

That most of the world's mythology deals with the antics of gods and goddesses need not be stressed. But the question as to what these deities have to do with astral motifs may reasonably be asked. To begin with, we have to keep in mind that the frolics of the mythological gods of just about every ancient nation were anything but what we would allude to as being godlike.<sup>7</sup> Contrary to popular belief, the word "god" did not derive from "good."<sup>8</sup> As Edwin Krupp informed his readers, even some of the ancient Greeks themselves "couldn't take the all-too-human theatrics of the gods seriously."<sup>9</sup> Which is why the Stoic philosophers were forced to assume that these godly escapades had to represent nothing more than allegories.<sup>10</sup>

Although ancient deities have tended to take something of a back seat in the modern world,<sup>11</sup> Manuel was surely right in his belief that "we have continued to speculate about their origins and meaning."<sup>12</sup> Even so, when it comes to the astral motifs embedded in the world's corpus of myths, a change of mind has definitely taken place in recent times among

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<sup>1</sup> R. Wertime & A. Schuster, "Written in the Stars," *Archaeology* (July-August 1993), p. 32.

<sup>2</sup> *Ibid.*

<sup>3</sup> M. A. (Rens) van der Sluijs, "But What About Jung?" Picture of the Day at *thunderbolts.info* (July 9, 2008), p. 1.

<sup>4</sup> D. Cardona, *Flare Star* (Victoria, British Columbia, 2007)—henceforth simply *Flare Star*—pp. 264 ff.

<sup>5</sup> M. A. van der Sluijs, "Gods and Planets," *Chronology & Catastrophism Workshop* (2003:1), pp.14-16.

<sup>6</sup> *Idem*, "Gods in the Flesh—Part One," Picture of the Day at *thunderbolts.info* (March 17, 2008), p. 3.

<sup>7</sup> See here especially *God star*, pp. 43 ff.

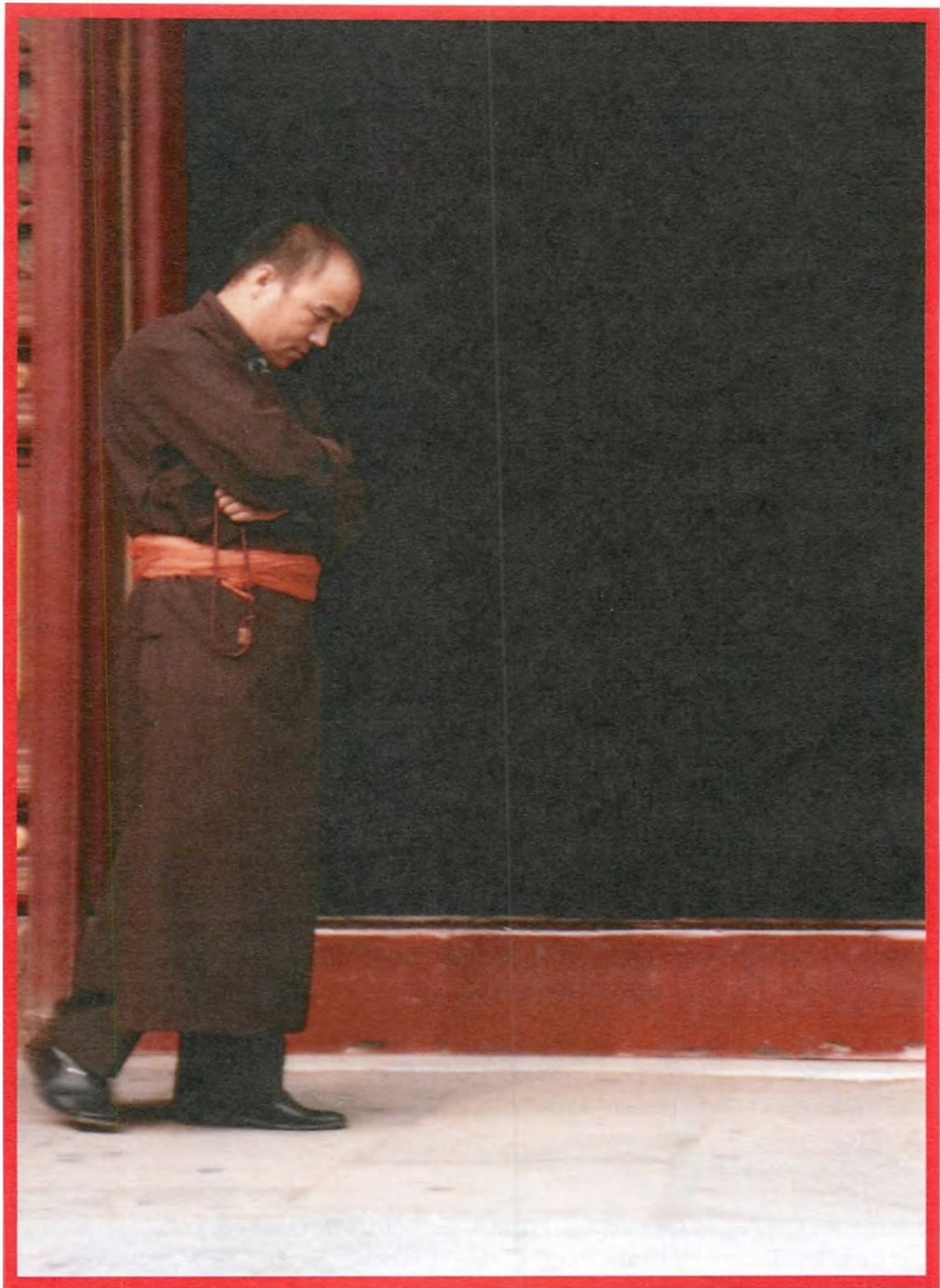
<sup>8</sup> M. Müller, *op. cit.*, p. 148.

<sup>9</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 16.

<sup>10</sup> *Ibid.*

<sup>11</sup> See here, for instance, F. E. Manuel, *op. cit.*, p. 311.

<sup>12</sup> *Ibid.*



**Buddhism—a religion that has additionally involved itself in the veneration of the constellations as well as of the planets.**

**Shown above: Modern Buddhist monk, Yong He Gong Lamasery, Beijing.  
(Photograph by the author.)**

mythologists. This was clearly demonstrated at the very end of the twentieth century by Wolfgang Heimpel. Despite the fact that he was quite aware of “the astral dimension” of mythology, he had also convinced himself, and was thus trying to sway his readers, that “the primary concern of myths” had to do with “the great stages of human life” and that mythology’s astral associations “cannot have shaped the myths in a fundamental way.”<sup>1</sup> We are, in this respect, of a mind with Ev Cochrane who said of the above quotation: “Greater nonsense it would be difficult to find.”<sup>2</sup>

## EUHEMERISM

As far as is known, it was the Sicilian philosopher Euhemerus who, sometime around 300 B.C., was the first to posit that the gods originated in the convoluted traditions of past historical persons. In time, Euhemerism, as the theory eventually became known, just as easily transformed myths into a broader cultural history.<sup>3</sup> But neither did this theory win the day. “Primitive monotheism, occasional astral worship, and Euhemerist deification of kings,” Manuel was right to remind us, “were [by others] combined in one system.”<sup>4</sup>

In actual fact, however, it was exactly the opposite that really occurred. Myths, Georges Dumézil rightly declared, “have merely been transformed *from* the world of gods *to* the world of men.”<sup>5</sup> Or, as Cochrane briefly expressed it, the adventures of the gods were metamorphosed into history, “pure and simple.”<sup>6</sup>

An excellent example of the transformation of a mythic figure into a pseudo-historical person is also supplied by Cochrane in his analytical study of the Biblical Samson.<sup>7</sup> A similar, but more serious, case concerns the Mesopotamian Gilgamesh whom some historians continue to present as a historical, but deified, king of Uruk.<sup>8</sup>

We should not, however, make matters worse by blindly reversing the entire process. We should not, in other words, de-historicize *each and every account* of past events that has been burdened with additional mythic themes. A case in point concerns the history of the Israelites as contained in the Old Testament in which actual past occurrences have been encumbered with mythic metaphor. More often than not, the supplementary insertion of a fabled theme in a historical account was meant to serve as a comparison with a mythological one in order to emphasize a character’s greatness or an event’s peculiarities.<sup>9</sup> To an extent, this is what happened to Alexander the Great who, for a while, ended up being deified by his countrymen.<sup>10</sup>

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<sup>1</sup> W. Heimpel, “Mythologie, A. I,” *Reallexicon der Assyriologie* (Berlin, 1999), p. 548, as quoted by E. Cochrane, “Actors in a Cosmic Drama,” *AEON* VII:1 (September 2006), p. 56.

<sup>2</sup> E. Cochrane, *loc. cit.*

<sup>3</sup> F. E. Manuel, *op. cit.*, p. 108.

<sup>4</sup> *Ibid.*, p. 118.

<sup>5</sup> G. Dumézil, *Archaic Roman Religion*, Vol. I (Baltimore, 1970), p. 76 (emphasis added).

<sup>6</sup> E. Cochrane, “Implications for Chronology if Certain ‘Historical’ Characters are Mythological,” *Chronology & Catastrophism Review* (2003:1), p. 99.

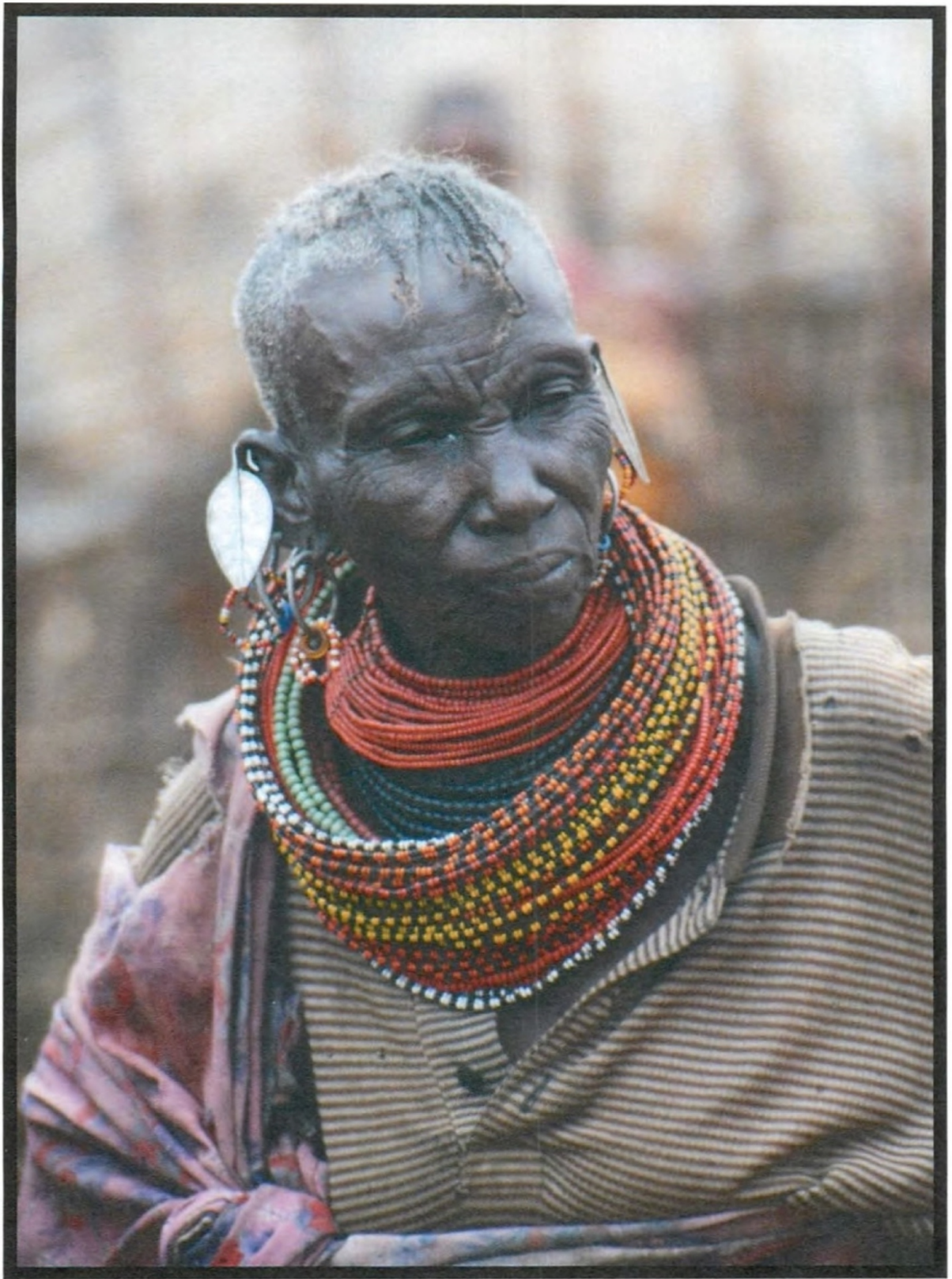
<sup>7</sup> *Idem*, “Samson Revealed,” *AEON* IV:6 (May 1997), pp. 67 ff.

<sup>8</sup> See, for instance, J. C. Davis, *The Human Story* (N. Y., 2004), pp. 20-21.

<sup>9</sup> See here, for example, J. K. Hoffmeier, *Israel in Egypt* (Oxford University Press, 1997), p. 213.

<sup>10</sup> E. C. Krupp, *op. cit.*, p. 16.





The religious rites, myths and legends of African tribes generally trace to astral motifs.  
Shown above: Turkana patriarchal tribesman, Kenya.  
(Photograph by the author.)



Samson—shown here killing the lion—a good example of the transformation of a mythic figure into a pseudo-historical person  
(From an illustration by Lord Leighton.)

In other cases, both Biblical and otherwise, past celestial events simply got confused, and thus amalgamated, with historical ones.

### ASTROGEOGRAPHY

The historicizing of myth actually involves more than historical persons and events. Euhemerus aside, ancient nations had long identified mythological terrains within the boundaries of the lands in which they finally settled. Such was the case with the rivers of paradise, the so-

called navel of the Earth, and God's sacred mountain.<sup>1</sup>

Various localities in Egypt were named after the astral fields of their mythology.<sup>2</sup> Temples, to say nothing of their cultic equipment, were constructed according to what was believed to be heavenly prototypes.<sup>3</sup> Such was the concept behind the erection of Solomon's temple in Jerusalem,<sup>4</sup> as so, also, was Jerusalem itself said to have been built according to a celestial model.<sup>5</sup>

In fact, various cities around the world were said to have been constructed in imitation of cosmic ones.<sup>6</sup> A good example of this is China's Forbidden City in Beijing.<sup>7</sup> But not only cities. In China, the entire "earthly kingdom" was said to have been set up "to reflect the heavenly sphere."<sup>8</sup> To the Hindus, the whole of India corresponded to a celestial one.<sup>9</sup> "Everything that is found upon Earth is found also in the heavens," claims the Jewish *Talmud*.<sup>10</sup>

But we're ahead of ourselves—so let's get back on track.

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<sup>1</sup> See here, for instance, F. Lenormant, "Ararat and Eden," *The Contemporary Review* (September 1881), p. 462.

<sup>2</sup> M. Eliade, *The Myth of the Eternal Return* (London, 1955), p. 6.

<sup>3</sup> A. de Grazia, *God's Fire* (Princeton, N.J., 1983), p. 53.

<sup>4</sup> L. E. Stager, "Jerusalem as Eden," *Biblical Archaeology Review* (May/June 2000), pp. 36 ff.

<sup>5</sup> *Ibid.*, p. 47; M. Eliade, *op. cit.*, p. 8.

<sup>6</sup> *Ibid.*, p. 9; D. N. Gellner, *The Anthropology of Buddhism and Hinduism* (New Delhi, 2001), pp. 278-280.

<sup>7</sup> E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), p. 271.

<sup>8</sup> J. N. Sammer, "The Cosmology of Tawantinsuyu," *KRONOS* IX:2 (Winter 1984), p. 28.

<sup>9</sup> R. L. Thompson, *Mysteries of the Sacred Universe: The Cosmology of the Bhagavata Purana* (Alachua, FL, 2000), p. 189.

<sup>10</sup> R. Thiel, *And There Was Light* (N. Y., 1957), p. 26.



# Chapter 2

## Theography

### RELIGION'S ORIGINS

Religion is firmly embedded in mythology—and only those of a deep religious disposition will find that difficult to acknowledge. But since, in the main, scholars do not accept a cosmic origin for mythology, they can seldom run a religion to ground. Although we do not normally agree with much that James Frazer had to offer in his monumental study, there was one thing he stressed among others which rings absolutely true. “The history of religion,” he wrote, “is a long attempt to reconcile old custom with new reason; to find a sound theory for an absurd practice.”<sup>1</sup>

“The most perplexing subject to an eighteenth-century man in quest of reason [wrote Frank Manuel] was the origin of religious practice and belief. This mystery troubled the avowed atheist even more than the vacillating theist, and was magnified to the point where it became the great enigma of human nature.”<sup>2</sup>

Eighteenth century aside, the above held just as true down through the years. In fact, until recently, scholars had been condemned to commence their studies at some point far down the evolutionary line after the transmogrifications of time had converted the object of their studies into a veritable mish-mash of occult drivel. The only task they seemed to have been capable of, one which they often accomplished in a thorough fashion, was to trace its concepts, rites, and motifs to some other religion, some other people, or some other time. In so doing, however, they were not solving the problem, they were merely demonstrating how widespread it really is.

As Mircea Eliade pointed out, most of man’s religious attitudes have been with him “from the most primitive times.”<sup>3</sup> And yet those attitudes had not always been there. “Religious sentiment,” as Manuel put it, “was not inborn, but was acquired by men at a given moment in time.”<sup>4</sup> Or, as the evolutionary biologist and psychologist Robin Dunbar declared: “In the beginning, religion didn’t exist.”<sup>5</sup> And although that might appear as a trite statement, it inevitably leads to a question that Dunbar also asked—“so why did we feel the need to invent it?”<sup>6</sup>

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<sup>1</sup> J. G. Frazer, *The Golden Bough: The Roots of Religion and Folklore* (N. Y., 1890/1981), Vol. II, p. 62.

<sup>2</sup> F. E. Manuel, *The Eighteenth Century Confronts the Gods* (Cambridge, Mass., 1959), p. 133.

<sup>3</sup> M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 463.

<sup>4</sup> F. E. Manuel, *op. cit.*, p. 134.

<sup>5</sup> R. Dunbar, “We Believe,” *New Scientist* (January 28-February 3, 2006), p. 30.

<sup>6</sup> *Ibid.*



Alexander the Great who, for a while, ended up being deified by his countrymen.  
(Illustration by Charles Hogarth.)

The inherent difficulty in getting to the bottom of this particular dilemma was emphasized by Mircea Eliade close to the end of the twentieth century.<sup>1</sup> Not that it has stopped anyone from trying. Take Daniel Dennett, the director of the Center for Cognitive Studies at Tufts University, for instance. Even at its best, his theory can be said to have been in vogue, on and off, for quite some time. What is new about Dennett's take is the scientific approach he brings to the subject.<sup>2</sup> But, despite what many might see as a cogent line of reasoning, the basis of

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<sup>1</sup> M. Eliade, *op. cit.*, p. 1.

<sup>2</sup> D. C. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (N. Y., 2006), *in toto*.



his theory can be expressed in a single word—ghosts.

I'm hoping here that most of those who read this book will know that ghosts do not exist. They never did. But we all dream. And in our dreams we often face our dear departed ones. Primitive tribes, up to the present, believe that these manifestations constitute the spirits of the dead who somehow live on in some mysterious region. Dennett cannot be wrong in assuming that this would also have been the case with our prehistoric ancestors.

From that understandable premise, Dennett then supposes that when it came to deceased fathers or village elders, it would have been natural for those who dreamed of them to ask for advice when awakening. And in the absence of answers—which, lacking an impressionable imagination, would have been quite natural—disappointment would have set in.

Enter those whose trancelike ability, or maybe even quackery, would have impressed all those who lacked the art, some of whom would have taken the opportunity to interpret others' dreams and supply answers to the questions asked. Thus were born shamans, witch-doctors, medicine-men—eventually priests and all that came with priesthood. Deceased village elders, if not dead fathers, would eventually have been transmogrified into phantoms of great power on their way to becoming gods.

Rituals, which Dennett claims originated as aids in acquiring answers from the dead, became liturgies and, thousands of years later, masses of the unwashed would crowd into temples, synagogues, mosques, and cathedrals, seeking forgiveness from real and imaginary crimes, in the hope of finding peace and happiness in some paradisiacal life after death.

That, in brief, is what Dennett claims to have been the “natural phenomenon” behind the origin of religion. It is not that there's no truth in *any* of his claims. But, as we have already discussed in our previous chapter, to say nothing of our earlier works,<sup>1</sup> his theory fails to account for the similar—in some cases near-identical—content of myths from diverse parts of the ancient world, east and west of vast dividing oceans. Besides, as Eliade pointed out, the idea that religion evolved “from the simple to the complex”—that is from dreams, to ghosts, to gods—is a hypothesis that, given the evidence from mythology, cannot be proved.<sup>2</sup>

Things have changed, although not necessarily for the better. Man's belief in the supernatural is now being looked at through sophisticated electronic equipment. To Dunbar, “religion is a real evolutionary puzzle.”<sup>3</sup> And if one looks to solve it through the requirements of life's evolution on Earth, it will certainly always be. But not everyone sees the matter that way. On the contrary, as one report has it, the majority of evolutionary scientists view religion as “a natural product of human evolution.”<sup>4</sup>

It is not that Dunbar himself has not tried to come up with some aspects of religion that might have benefited humanity's evolutionary climb, but, as he rightly concludes, these traits are “unlikely to provide much insight into the beginnings of religious belief.”<sup>5</sup> And yet, he,

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<sup>1</sup> *God Star*, pp. 35 ff.; *Flare Star*, p. 99.

<sup>2</sup> M. Eliade, *op. cit.*, p. xviii.

<sup>3</sup> R. Dunbar, *loc. cit.*

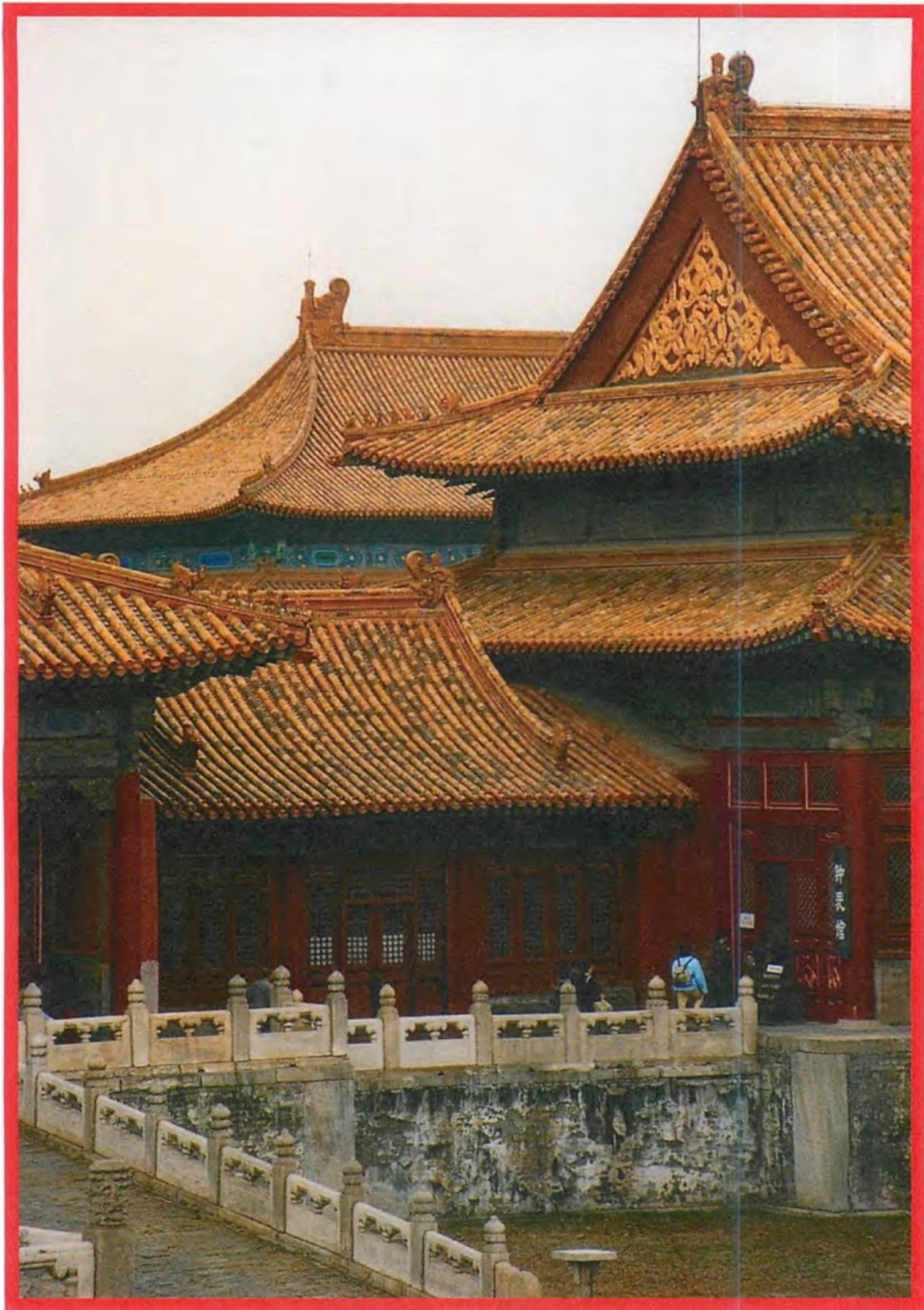
<sup>4</sup> G. W. Graffin & W. B. Provine, “Evolution, Religion and Free Will,” *American Scientist* (July-August 2007), p. 297

<sup>5</sup> R. Dunbar, *op. cit.*, p. 31.



**Ancient temples—like the one to Amon at Karnak, Egypt, shown above—were constructed according to what was believed to be heavenly prototypes.  
(Photograph by the author.)**





**Various ancient centers around the world, like the Forbidden City in Beijing, shown above, were said to have been constructed in imitation of cosmic ones.  
(Photograph by the author.)**

too, realizes that man's "religious practices" seem to have "very ancient origins."<sup>1</sup> Despite the tabulated graphs he presents, however, we cannot accept that the germs of man's religious experience, in the form of intentionality, appeared with archaic humans around 500,000 years ago, to be strengthened some 300,000 years later with anatomically modern man.<sup>2</sup>

Again, it is not that we doubt mankind's early acquisition of intentionality. But, for one thing, can it be said that, at least to an extent, animals do not also possess this attribute? And, more importantly, in what manner would intentionality have led to the belief in a bevy of wild gods who, were we to accept their biographies, had spent a great portion of their time warring against each other?

There is then Dean Hamer. As the title of his book—*The God Gene*—implies, according to him religion is an attribute of our genetic makeup, a mere product of evolution through natural selection.<sup>3</sup> But although this gene, known as VMAT2, might account for man's acquired capacity to envision spiritual entities—although even that has been severely questioned<sup>4</sup>—it cannot explain the nature of the mythological record with its numerous deities and the copious events in which they participated. Hamer's identity of VMAT2 as a God gene is as valid as his previous announcement of a homosexual gene which no one else has been able to detect.<sup>5</sup>

And yet Hamer is not alone. Quite a few other scientists are focusing on genetic and biochemical means in their attempts to fathom the power that religion holds over most of mankind. They have been applying brain scans, genetic probes, and similar methods in a concentrated effort to locate what they believe to be the physiological cause of the religious experience. One of their desires is to be able to replicate such an occurrence—whatever that may turn out to be—which might then allow them to explain religion's abiding influence.<sup>6</sup> They do not seem to realize that the abiding influence of religion is merely hope.

"The endeavor is controversial," wrote John Horgan, "stretching science to its limits."<sup>7</sup> And if that's not an understatement, I do not know what is. Besides which, the nature of the study tends to saddle it with the personal motivation of those involved. While some see religion as "an embarrassing relic of our past," others hope their studies will end up enriching faith.<sup>8</sup> All of which brings to mind Friedrich Nietzsche's statement:

"...the cause of the origin of a thing and its eventual utility, its actual employment and place in a system of purposes, lie worlds apart; whatever exists, having somehow come into being, is again and again reinterpreted to new ends..."<sup>9</sup>

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<sup>1</sup> *Idem*, "The Origins of Religion," in *ibid.*, p. 32.

<sup>2</sup> *Ibid.*, p. 33.

<sup>3</sup> D. H. Hamer, *The God Gene: How Faith is Hardwired into our Genes* (N. Y., 2004), *in toto*.

<sup>4</sup> C. Zimmer, "Faith-Boosting Genes," *Scientific American* (October 2004), p. 110.

<sup>5</sup> *Ibid.*, pp. 110-111.

<sup>6</sup> J. Horgan, "The God Experiments," *Discover* (December 2006), p. 52.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> F. W. Nietzsche, *The Genealogy of Morals*, 2:12.





**From an original class of interpreters came the mediators between gods and men who eventually led to the various priesthoods of the modern world.**

**Shown above: Kikuyu witch-doctor, Nyaharuru, Kenya.  
(Photograph by the author.)**

And that, in our opinion, is exactly what transpired in the evolution of religion. As presently observed, all current religions are the long-befuddled derivations of an original series of cosmic events. The Hindus, of course, have always had it right. "We must do what the gods did in the beginning,"<sup>1</sup> they have long maintained. "Thus the gods did," they stress, "[and] thus men do."<sup>2</sup> This Hindu adage, Eliade stressed, "summarizes all the theory underlying rituals [and thus religions] in all countries."<sup>3</sup> And the only way to understand that, of course, is to find out what it was that the gods did in the beginning. Although one could also ask: The beginning of what?

## FEAR AND TREMBLING

Whatever it was that the gods did in the beginning of whatever had begun seems to have inspired mankind with an abiding fear. But an abiding fear of what? Why did man indulge in "bizarre religious feelings" asked Frank Manuel in paraphrasing John Trenchard, the English deist of the eighteenth century, "and perform unnatural acts in the name of God?"<sup>4</sup>

"How could rational men be so readily deceived by priestly frauds? How was it possible for them to believe in myths of abominable gods as if they were realities?"<sup>5</sup>

The answer, which Manuel also supplies, is that man was "fear-ridden," and that his religion "was born of terror."<sup>6</sup> This fear has been identified by some as the fear of death.<sup>7</sup> What it originated as, however, is the fear of punishment. Thus, to give but one example, the fear inherent in the religion of the Tibetan Sherpas is actually concerned with the tribulations of the inanimate world.

"The Sherpas perform most of their rituals because, although this may sound pedestrian, it is traditional to perform those rituals, *and because disorder might ensue if they don't*. The world is not a continuously threatening place; *the point is to insure that it doesn't become so*."<sup>8</sup>

Although, as we've said of others, we cannot agree a hundred per cent with the views expressed by Marinus van der Sluijs, he, too, realizes that the "threat" which lies at the basis of man's ancient fear was not an imaginary one. The very "worship of deities," he has ably written, flowed directly "from a series of extremely impressive, arguably traumatizing experiences

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<sup>1</sup> *Satapatha Brahmana*, VII:2:1:4.

<sup>2</sup> *Taittiriya Brahmana*, I:5:9:4.

<sup>3</sup> M. Eliade, *Cosmos and History* (N. Y., 1959), p. 21.

<sup>4</sup> F. E. Manuel, *op. cit.*, p. 74.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.* p. 230.

<sup>7</sup> I. B. Cohen, "An Interview With Einstein," *Scientific American* (September 1955), p. 73.

<sup>8</sup> S. B. Ortner, *Sherpas Through Their Rituals* (Cambridge, 1978), p. xii (emphasis added).

mankind had with forces of nature rarely experienced today.”<sup>1</sup> And although such “threats” have been claimed to have had a precedent, it is unfortunate that, in most cases, the resultant fear has been traced back by a bevy of modern scholars to cosmic impacts,<sup>2</sup> concerning which we have already spoken. In the end, as Ev Cochrane noted, the “obvious answer” seems to be that “some celestial apparition” that is “no longer visible” would have “provided a spectacular and awe-inspiring form that came to serve as the focal point of religious and mythical beliefs everywhere.”<sup>3</sup> But even that, although quite so, falls somewhat short.

Despite the fact that Nicolas of Cusa, the fifteenth century cardinal of the Roman Catholic Church, was naïve enough to revive the heliocentric theory, he was one of the first scholars in post-classical times to claim that the motions of the heavenly bodies lack inherent stability.<sup>4</sup> He was also of the belief that certain claims made by some of the ancient writers may be explained by invoking a sky that was entirely different from the one seen in his own time.<sup>5</sup>

And, as those who have read our prequels rightly know, it is precisely this view that forms the basis of our hypothesis.

## DIVINE DIVERSITY

As we noted in our first volume of this series,<sup>6</sup> a list of Sumerian deities alone would contain more than five thousand individual gods and goddesses.<sup>7</sup> Nor is this merely based on a modern calculation. One famous king of Assyria makes mention of “four thousand deities of heaven.”<sup>8</sup> Much later in time, Marcus Terentius Varro, one of the most prolific writers ancient Greece produced, vouched for thirty thousand individual gods.<sup>9</sup> Actually, one should not be surprised at the number of ancient deities when one comes to grips with the quantity of myths in which they are named. As Cottie Burland has indicated, if we had to collect the entire myths of mankind, we would end up with a library containing millions of volumes, to say nothing of “a great gathering of songs.”<sup>10</sup> And although Max Müller did not see “anything strange” in this multiplicity,<sup>11</sup> it has been viewed by others as a problem when attempting to reduce these thousands of divinities into a handful of astral objects and their varying aspects.

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<sup>1</sup> M. (Rens) van der Sluijs, “The Nature of Nature Gods,” *Picture of the Day*, on *thunderbolts.info* (June 4, 2008), p. 3.

<sup>2</sup> See here, for example, D. Steel, *Rogue Asteroids and Doomsday Comets* (N. Y., 1995), *in toto*.

<sup>3</sup> E. Cochrane, “Implications for Chronology if Certain ‘Historical’ Characters are Mythological,” *Chronology & Catastrophism Review* (2003:1), p. 99.

<sup>4</sup> L. C. Stecchini, “The Inconstant Heavens,” in A. de Grazia (Editor), *The Velikovsky Affair* (N. Y., 1966), p. 85.

<sup>5</sup> *Ibid.*

<sup>6</sup> *God Star*, p. 52.

<sup>7</sup> F. G. Bratton, *Myths and Legends of the Ancient Near East* (N. Y., 1970), p. 21.

<sup>8</sup> G. Rawlinson, *The Seven Great Monarchies of the Ancient Eastern World*, Vol. I (N. Y., 1885), p. 349.

<sup>9</sup> F. E. Manuel, *op. cit.*, p. 113.

<sup>10</sup> C. A. Burland, *Myths of Life & Death* (N. Y., 1974), p. 251.

<sup>11</sup> M. Müller, *Chips from a German Workshop*, Vol. II (N. Y., 1870), p. 160.

There are, however, certain matters that have to be kept in mind. To begin with, a great number of deities are mentioned once in whatever text they happen to make an appearance and never again. Various others personify objects that have nothing to do with cosmic bodies. The Romans and the Chinese, to name two cultures out of many, designated a god or goddess for just about anything they could think of, including such mundane items as fruits, vegetables, pets, and heaven only knows what.

What we are mainly concerned with, on the other hand, are the major deities in ancient and modern polytheistic pantheons despite the fact that there, too, we happen to come across more divinities than can be accounted for by the number of heavenly bodies that ancient man was familiar with. But, as we have already demonstrated in our previous work,<sup>1</sup> these particular deities originated in duplications of each other as retained by diverse tribes when they merged into vaster nations.<sup>2</sup>

## PLANETARY NOMENCLATURE

With the Internet having become the world-wide web that it is, the last thing I would want to do is to get involved in an electronic debate which could go on forever and a day. Besides which, some dissenting Internet voices are very hard to quell. One such voice belongs to C. Leroy Ellenberger who once served as a Senior Editor with me on the staff of *KRONOS*. One of the criticisms he has been leveling at our particular thesis over and over again is that the planets were not really venerated as gods until much later in the history of mythology. And although we have more than once shown that this accusation is baseless,<sup>3</sup> he continued to repeat it *ad nauseam* without as much as hinting at the objections raised against it. I hate to have to say this but, some time back, van der Sluijs started voicing similar ideas, although, I must also stress, without Ellenberger's animosity and/or derision. As we noted in our previous chapter, he, too, is now on record in minimizing the role of planets in mythology. As he has explicitly stated:

"There is evidence that the specific identification of planets with gods is marginal or non-existent in many parts of the world, and of late origin in other parts. The myths generally existed *prior* to the establishment of links with planets"<sup>4</sup>

What is, however, interesting in van der Sluij's case is his former assessment "that the myths" might have "reflected the appearance and development of certain solid bodies at close quarters with the earth," which "possibility" he claimed to be "by no means discarded."<sup>5</sup> More than that, he actually went further in contending that "all mythical archetypes were spawned

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<sup>1</sup> *God star*, pp. 146-147.

<sup>2</sup> See here also, M. (Rens) van der Sluijs, *loc. cit.*

<sup>3</sup> See here, for instance, the evidence presented in *God star*, pp. 51 ff.

<sup>4</sup> M. A. van der Sluijs, "Gods and Planets," *Chronology & Catastrophism Workshop* (2003:1), p. 14 (emphasis added).

<sup>5</sup> *Ibid.*



by catastrophic encounters with [these] solid bodies in the sky.”<sup>1</sup> What then transpired, according to him, is that much later, when these “catastrophic encounters” had come to an end, “the ancient stargazers lost track of the solid bodies” which were “subsequently and independently re-identified with the planets, with comets, with the sun, the moon, the most conspicuous stars, and a host of other natural phenomena, in the belief that these bodies represented the true gods” of whatever had gone before.<sup>2</sup> But nowhere did he tell us what these enigmatic “solid bodies,” in lieu of planets, were or could have been. In fact, he later dispensed with all mention of these solid bodies while continuing to opt for the phenomena he once believed they were responsible for. But more on that later.

In the meantime, so that there will be no misunderstandings, van der Sluijs is not entirely opposed to the major proposal we have been delineating since our first volume in this series. On the contrary, as he himself admits, his own view “shares a good deal of the methodological underpinnings” exhibited by our theory “and was based on its central ideas to a large extent.”<sup>3</sup> But, as time went by, although he never quite disowned us, the distance between him and us did widen a bit more. In any case, as of this writing, his disassociation of the archaic deities from the planets we continue to identify them with has not changed. His main argument is contained in the following:

“China has been greatly influenced by India from the earliest times, especially by the means of Buddhism, and India was, in turn, heavily influenced by the Greeks who settled in parts of India in the aftermath of Alexander the Great’s victories in the east...Earlier even the people of India are believed to have been in touch with the Babylonians and Sumerians, especially in regard of astronomy and agriculture. It is also widely held that Egypt in its earliest days was strongly receptive towards Mesopotamian astronomy...Egypt, Mesopotamia, India and China must, therefore, be treated as one cultural continuum, at least in their shared residue, and it is not to be excluded that the Polynesians learned from the Hindus and the Maya from the Chinese as well. The spread of astronomy from a Babylonian origin is widely acknowledged and backed up with proper documentation.”<sup>4</sup>

But why restrict this spread to just astronomy? According to the above, *all* of ancient tradition is traceable to Babylonia. And since this would include mythology itself, why not forget the whole thing and have done with it? Nor am I speaking out of turn. Thus, to give but one example, a cosmogonic text preserved in a somewhat damaged Babylonian tablet describes a succession of gods, including divine patricide, that bears certain similarities to the Greek version as contained in Hesiod’s *Theogony*.<sup>5</sup> But is this indicative of Greek borrowing from an older Babylonian source? Or are the two accounts similar because they both describe

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*, p. 15.

<sup>4</sup> *Ibid.*, Part 2, in *ibid.* (2003:2), p. 15.

<sup>5</sup> W. F. Albright, *Yahweh and the Gods of Canaan* (N. Y., 1968), pp. 93-95.

a celestial series of events that would have been witnessed by all and sundry? Had one been a copy of the other, why do they both contain so many differences? But, as one might also argue, if they contain so many differences, how could they be reports of the same series of events? And yet, it is exactly in such instances that the proof of the pudding lies since it is not conceivable that the same event, or series of events, would be reported in exactly the same terms by different witnesses scattered in different parts of the world. On the contrary, one would suspect copying had such accounts been recounted in exactly the same manner. Is that not what *comparative* mythology is all about?

It is not that borrowing did not also take place, but in most cases where this transpired, as indicated in our previous volume, the evidence is very clear cut. The Greeks did not hide the fact that, when it came to astronomy, they owed much to the earlier Babylonians<sup>1</sup> who were definitely keeping track of the planets by 687 B.C.<sup>2</sup> Some actually claim that Babylonian planetary observation can be traced even earlier to 1600 B.C.<sup>3</sup> As Edwin Krupp has noted, it might even all trace back to a previous Sumerian precedent.<sup>4</sup>

Needless to say, none of this has anything to do with whether the identification of gods as planets is, or is not, of late origin. Yet think about it: How would it even have been possible to derive a coherent planetary system and a series of astronomical events by treating the ancient deities as planets had these deities and their activities nothing to do with such cosmic matters? When all is said and done, even van der Sluijs had to admit that our conjectured scenario “gives a much fairer hearing to mythology...than any other theory proposed before” and that “it answers *all* demands that an explanation for the origin of mythology should meet.”<sup>5</sup>

All that—on the basis of a false premise?

As I have often asked in relation to this particular problem, when it comes to such derivations, how late *is* late? I could point to other researchers who have concluded that *all* Mesopotamian deities, *without exception*, were associated with the heavenly bodies,<sup>6</sup> and that *in the most archaic period* of Uruk, the determinative for “god” was *only* associated with astral entities.<sup>7</sup> In fact, the Neo-Babylonians worshipped not only the effigies of gods, but their planetary symbols as well.<sup>8</sup> But more than that, as I have also often noted, when it comes to Sumer, the cuneiform sign for “god” and “star” was one and the same<sup>9</sup>—which proves that stars and gods were thought to be synonymous *as far back as extant written records reach*.

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<sup>1</sup> *God Star*, pp. 113-114.

<sup>2</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 124.

<sup>3</sup> A. F. O'D. Alexander, *The Planet Saturn* (N. Y., 1962), pp. 41-42.

<sup>4</sup> E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), p. 230.

<sup>5</sup> M. A. van der Sluijs, “Gods and Planets,” *Chronology & Catastrophism Workshop* (2003:1), p. 15 (emphasis added).

<sup>6</sup> See here, for instance, N. H. Snaith, *The Distinctive Ideas of the Old Testament* (N. Y., 1964), p. 29.

<sup>7</sup> K. Szarzynska, “Some of the Oldest Cult Symbols in Archaic Uruk,” *Jaarbericht ex Oriente Lux*, 30 (1987-1988), p. 10.

<sup>8</sup> S. Lloyd, *The Art of the Ancient Near East* (N. Y., 1965), p. 235.

<sup>9</sup> S. Langdon, *Semitic Mythology* (Boston, 1931), p. 93; I. S. Shklovskii & C. Sagan, *Intelligent Life in the Universe* (N. Y., 1968), p. 460; J. E. Pfeiffer, *The Emergence of Society: A Prehistory of the Establishment* (N. Y., 1977), p. 170.

## THE PROTO-SATURNIAN PRIMACY

The major planetary deity we have had reason to underscore in our previous volumes was the one the Romans referred to as Saturnus—the god and planet Saturn. We must therefore return to grips with this foremost of celestial beings. For one thing this will allow us to demonstrate that the same deity was known by more than one name even among those of the same race and/or nationality. It will also furnish us with a springboard from which to launch our main objective.

That humanity has known, and has kept track, of the planet Saturn since prehistory is now admitted by the scholarly world.<sup>1</sup> And although modern astronomers have yet to understand exactly why, they do realize that, as far as the mytho-historical record goes, Saturn has always been considered to be the ruler of the planets.<sup>2</sup> More than that, however, the planet Saturn served as the prime god at the head of the pantheons of various ancient nations. And that included the God of the Old Testament.

At the very beginning of *Genesis*, the divine author of Creation is given as Elohim. Although this name is usually translated as “God,” it is actually the plural form of the Hebrew deity known as El. The plurality of Elohim is quite evident in the manner by which he is occasionally made to refer to himself. Thus when he became dissatisfied with what Adam did in Eden, he is reported to have said: “Behold, the man is become as one of *us*.”<sup>3</sup> So, likewise, when he decided to punish the builders of the Tower of Babel. “Come,” he is made to say, “let *us* go down, and there confound their language.”<sup>4</sup>

Both Jews and Christians have attempted to interpret this plurality in different ways. Philo Judaeus, for instance, took it to allude to “the angels of God” rather than to God himself.<sup>5</sup> William Heidel would have us believe that *the* Elohim were actually the allies of El<sup>6</sup>—whoever *they* might have been—which tid-bit he procured from Eusebius Pamphili.<sup>7</sup> Christian theologians, on the other hand, have interpreted this curiosity as indicating the co-operation of the Logos—that is the Word of God made flesh—in God’s early edicts. Roman Catholic apologists explained it all by incorporating the Trinity—God the father, his son, and his holy spirit—in the name and acts of Elohim. As Louis Ginzberg rightly stated, it remains “a moot question, in Jewish, as well as in Christian literature, as to how [this plurality] is to be understood.”<sup>8</sup> Scholarship has however now established that, very much as in the case of modern monarchs, ancient deities were sometimes referred to by what is known as the plural of majesty or the majestic plural—in other words, the royal “we.”<sup>9</sup> The Habiru, the Phoenici-

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<sup>1</sup> C. O. Choi, “Mounting Mysteries at Saturn Keep Scientists Guessing,” *Space.com* (August 27, 2007), p. 1.

<sup>2</sup> M. Ratcliffe & A. Ling, “Saturn Rules the Night,” *Astronomy* (January 2006), p. 60.

<sup>3</sup> *Genesis* 3:22 (emphasis added).

<sup>4</sup> *Ibid.*, 11:7 (emphasis added).

<sup>5</sup> Philo Judaeus, *De Mundi Opificio* (a.k.a. *De Opificio Mundi*), 24.

<sup>6</sup> W. A. Heidel, *The Day of Yahweh* (N. Y., 1929), p. 470.

<sup>7</sup> Eusebius Pamphili, *Evangelicae Praeparationis* I:x:37b.

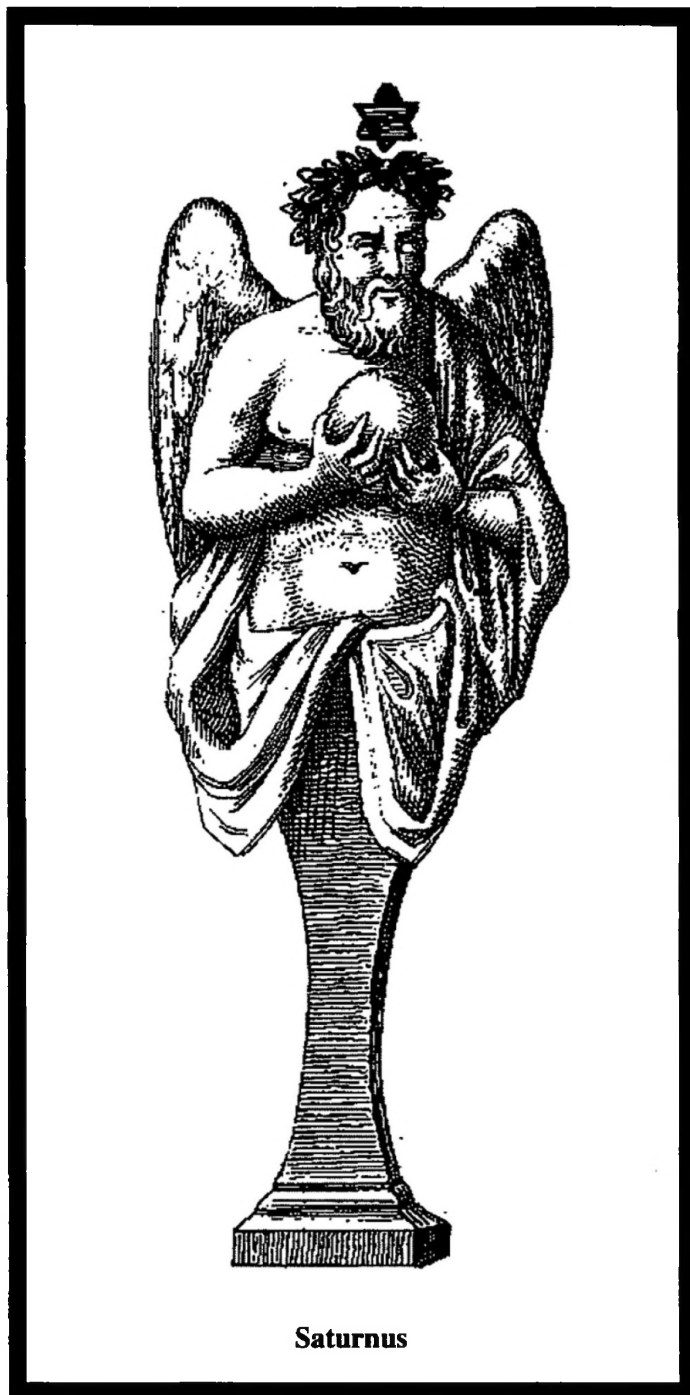
<sup>8</sup> L. Ginzberg, *The Legends of the Jews*, Vol. V (Philadelphia, 1961), p. 69.

<sup>9</sup> S. Dalley, *Myths From Mesopotamia* (Oxford, 1991), p. 164.

ans, and the Hittites, all made use of this practice.<sup>1</sup> That Elohim formed the majestic plural of El is now accepted as a given.<sup>2</sup>

What has also long been accepted is that El was one of the Semitic names for the planetary god Saturn. And while we had already presented some of the evidence on which this identification is based in our previous works,<sup>3</sup> we must now offer a few other examples for the benefit of those who might have picked up this volume without having perused its prequels. Thus, for instance, despite the fact that he was a Christian bishop in the city of Caesarea, Eusebius Pamphili—c.260-340 A.D.—had no qualms about referring to Elus, the Phoenician equivalent of the Biblical El, as having been the same as Kronos.<sup>4</sup> That Kronos was the Greek god of the planet Saturn was well known in his time, as it continues to be well known at present.<sup>5</sup> Eusebius made this quite clear when he referred to the Phoenician priest and writer Sanchoniathon who himself had unambiguously stated that Elus was the deified “star” known as Saturn.<sup>6</sup> This is also upheld by William Albright in his outright identification of El as the Latin Saturnus,<sup>7</sup> as it had been earlier by Hodder Westropp and Staniland Wake.<sup>8</sup>

The prime deity in the Old Testament, however, is Yahweh, often rendered Jehovah in the western world, and sometimes



Saturnus

<sup>1</sup> S. H. Langdon, *Semitic Mythology*, Vol. V of *The Mythology of All Races* (N. Y., 1931/1964), pp 72-73, 77.

<sup>2</sup> D. M. Rohl, *A Test of Time: The Bible—From Myth to History* (London, 1995), p. 228.

<sup>3</sup> *God Star*, check Index under El, Eleoh, Elohim, and Elos; *Flare Star*, likewise.

<sup>4</sup> Eusebius Pamphili, *op. cit.*, I:x:36, 37b, 38; G. Levi Della Vida, “El ‘Elyon in Genesis 14: 18-20,” *Journal of Biblical Literature* (March 1944), p. 4.

<sup>5</sup> See for instance, W. A. Heidel, *loc. cit.*

<sup>6</sup> Eusebius Pamphili, *op. cit.*, I:x:40c.

<sup>7</sup> W. F. Albright, *Yahweh and the Gods of Canaan* (N. Y., 1968), p. 144.

<sup>8</sup> H. M. Westropp & C. S. Wake, *Ancient Symbol Worship* (N. Y., 1875), pp. 59-60.

misrepresented as having been Abraham's god,<sup>1</sup> when, in effect, he was actually introduced much later in time by Moses.<sup>2</sup>

According to Frank Cross, Yahweh originated as a cultic name of El.<sup>3</sup> And although that suggestion has not met with universal approval among Biblical scholars, there is no doubt that Yahweh, also called Yaw, Yah or Yahu, was referred to as El.<sup>4</sup>

An assimilation with El would render Yahweh as a duplicate of the same Kronos/Saturn.<sup>5</sup> "That Yahweh and Saturn were identical," wrote Heidel, "was a belief widely accepted in antiquity."<sup>6</sup> It is also a belief that continues to be validated through modern research.<sup>7</sup>

According to the prophet Amos, the "star" of the Israelite god was Kiyun (Chiun), which "star" he accused his own people of having worshipped.<sup>8</sup> Kiyun is the same as the Kevan or Kivan of other Eastern peoples, another Semitic name for Saturn.<sup>9</sup> Even Kon, "derived from the same root," was but one more "Phoenician designation of Saturn."<sup>10</sup>

Another deity worshipped in ancient Israel was Šalem (Shalem). It is unfortunate that George Heider misidentified this god as "the Ugaritic deity of the evening star,"<sup>11</sup> when it is obvious that he confused Šalem with Šalimu, the god's female consort.<sup>12</sup> But that Shalem was yet another name for Saturn has been known for quite some time.<sup>13</sup>

In various ancient traditions, this very planet symbolized peace.<sup>14</sup> It is, in fact, from the very Saturnian name of Shalem that the Hebrew word for "peace," that is *shalom*, happens to be derived. So, likewise, with the Arabic *salaam* and the Maltese *sliema*.

Šalem was the god for whom Jerusalem was named.<sup>15</sup> It was also the deity for whom King Jedidiah, nicknamed Solomon after the very god in question, constructed his famous temple. As Hildegard Lewy noted:

"It was in honor of Šalim [the same as Šalem], the planet Saturn, that David and Solomon built the temple on Mt. Morîiâ [also rendered as Moriah], and it was therefore

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<sup>1</sup> S. Kauffman, "Does Science make Belief in God Obsolete?" *Scientific American* (June 2008), p. 20

<sup>2</sup> J. P. Hyatt, "Was Yahweh Originally a Creator Deity?" *Journal of Biblical Literature* (December 1967), p. 370.

<sup>3</sup> F. M. Cross, Jr., "Yahweh and the God of the Patriarchs," *Harvard Theological Review*, 55 (1962), pp. 225 ff.

<sup>4</sup> S. H. Langdon, *op. cit.*, p. 43; H. Shanks, "Magic Incantation Bowls," *Biblical Archaeology Review* (January/February 2007), p. 63.

<sup>5</sup> W. A. Heidel, *op. cit.*, p. 465.

<sup>6</sup> *Ibid.*

<sup>7</sup> G. de Santillana & H. von Dechend, *Hamlet's Mill: An Essay on Myth and the Frame of Time* (Boston, 1969), p. 222; *Flare Star*, check Index under "Yahweh."

<sup>8</sup> Amos 5:25-26.

<sup>9</sup> P. Gossman, *Planetarium Babylonicum* (Rome, 1950), p. 124; H. M. Westropp & C. S. Wake, *op. cit.*, p. 60.

<sup>10</sup> *Ibid.*, p. 68; but for more on this see *God Star*, pp. 205-207.

<sup>11</sup> G. C. Heider, *The Cult of Molek* (Sheffield, 1985), p. 48

<sup>12</sup> *Ibid.*, p. 118.

<sup>13</sup> See, her, *God Star*, pp. 208-213.

<sup>14</sup> R. Graves, *The Greek Myths*, Vol. I (Harmondsworth, 1964), p. 29.

<sup>15</sup> See *God Star*, pp. 208 ff.

the worship of this god which these two princes attempted to propagate among their subjects.”<sup>1</sup>

Despite the understandable objection of some of today’s Jews, it can thus be seen that the very name “Israel” translates best as “let El prevail,”<sup>2</sup> which, under our scheme, can then be rendered “let *Saturn* prevail.”

It is not without justification that the ancients spoke of Saturn as having been the god of the Jews,<sup>3</sup> even though they failed to realize that their own god was the very same Saturn under a different name.

## SATURN’S UNIVERSALITY

We come now to the deity usually referred to by mythologists as Enki-Ea. In actuality, Enki-Ea is the amalgamation of the Sumerian Enki and the Babylonian Ea, who were one and the same god.<sup>4</sup> Enki himself was also known by numerous titles,<sup>5</sup> as were many other Mesopotamian deities. Julian Morgenstern was one of those who realized that Enki-Ea has “much in common” with the Biblical El.<sup>6</sup> This, alone, would render Enki-Ea a Saturnian deity. Ea was also identified with Ya and/or Ya’u,<sup>7</sup> the same as the Hebrew Yahweh, and, therefore, again as Saturn.

Besides the above, Enki was considered to have been an aspect of the Babylonian god Anu,<sup>8</sup> whose older form is best transliterated as Anum.<sup>9</sup> Because in Sumer he had been known simply as An, which name translates as “High,”<sup>10</sup> this particular deity is often presented as a god of the sky,<sup>11</sup> although, as Edwin Krupp informs us, he was really “a cosmic force, a power in heaven.”<sup>12</sup> Morris Jastrow was of the opinion that Anu was “the common designation of the planet Mars,”<sup>13</sup> while Peter Jensen saw this god as another form of Saturn.<sup>14</sup> Why, then, do we accept the identification with Saturn but not with Mars? We do so on the

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<sup>1</sup> H. Lewy, “Origin and Significance of the *Mâgên Dâwîd*,” *Archiv Orientalni*, 18, pt. 3(1950), p. 354 (emphasis added); see also *God Star*, pp. 211-212 for additional information.

<sup>2</sup> *God Star*, p. 224.

<sup>3</sup> For more on this, see *ibid.*, pp. 205 ff.

<sup>4</sup> G. Michanowsky, *The Once and Future Star* (N. Y., 1977), p. 31; S. H. Langdon, *op. cit.*, pp. 92, 291.

<sup>5</sup> *Ibid.*, p. 105.

<sup>6</sup> J. Morgenstern, “The Divine Triad in Biblical Mythology,” *Journal of Biblical Literature*, LXIV (1945), p. 23.

<sup>7</sup> D. A. Mackenzie, *Myths of Babylonia and Assyria* (London, 1915), reprinted as *Mythology of the Babylonian People* (London, 1996), p. 207.

<sup>8</sup> S. H. Langdon, *op. cit.*, p. 93.

<sup>9</sup> S. Dalley, *op. cit.*, p. viii.

<sup>10</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 25.

<sup>11</sup> S. H. Langdon, *op. cit.*, pp. 89, 93; but see also *God star*, pp. 167-168.

<sup>12</sup> E. C. Krupp, *loc. cit.*

<sup>13</sup> M. Jastrow, Jr., “Signs and Names of the Planet Mars,” *American Journal of Semitic Languages* (October 1910), p. 74.

<sup>14</sup> P. Jensen, *Die Kosmologie der Babylonier*, as cited by D. Talbott, *Symbols of an Alien Sky* (Beaverton, Oregon, 1997), p. 30; D. Talbott, “Saturn: The Ancient Sun God,” *THOTH* (electronic newsletter sponsored by KRONIA Communications), Vol. I, No. 10 (April 22, 1997), p. 1.



**The Hebrew letters spelling *shalom*, meaning “peace,” derived from *Shalem*, one of the ancient Hebrew names of the Saturnian deity.  
(Illustration courtesy of Virginia Hanlon.)**

strength of comparative mythology, concerning which, in this particular case, we can best repeat what we have stated elsewhere. First of all, like the Saturnian deities of other nations, An was considered the father of all gods.<sup>1</sup> For that reason, An stood at the beginning of every theological list from all periods in the history of the nations that paid him homage.<sup>2</sup> But also, in Akkadian inscriptions, the phonetic writing of “El” was sometimes used for the logogram otherwise read as “An.”<sup>3</sup> In fact, in the god lists that were discovered at Mari, the two names, El

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<sup>1</sup> M. Müller, *op. cit.*, p. 94.

<sup>2</sup> *Ibid.*

<sup>3</sup> A. Murtonen, *A Philological and Literary Treatise on the Old Testament Divine Names* (Helsinki 1952), p. 29.



and An, are interchangeable.<sup>1</sup> El and An were believed to be the names of the same tutelary deity.<sup>2</sup> And if El is identifiable as the god Saturn, so is An and, therefore, Anu.

Cross cultural beliefs bridged geographic boundaries as well as epochal extents. With slight variations due to linguistic nomenclature even names remained recognizable across shifting national borders. Thus the name of the Mesopotamian Anu is recognizable in the combined second and third syllables of the Greek Ouranos.

The recognition that Ouranos was the equivalent of Anu is not new, although the identification is usually made because both these deities are believed to have represented heaven.<sup>3</sup> The same trend has additionally resulted in the identification of the same Ouranos with Olorun, the high deity of the Yoruba in West Africa.<sup>4</sup> That the very name Olurun means "Owner of the Sky," as distinct from the sky itself, does not seem to bother most mythologists.<sup>5</sup> All of which is hardly as bad as the demoting of Ouranos to the status of a human being who happened to gain national fame through his ardent study of the cosmos.<sup>6</sup> Even so, as E. Tonnelat pointed out in relation to the so-called sky-gods of various nations, it must not be assumed that their original function was the personification of the sky.<sup>7</sup> As far as the Phoenician Sanchoniathon was concerned, Ouranos was merely the equivalent of Kronos, the Greek Saturn.<sup>8</sup>

Keeping to the cross cultural derivation, or linguistic evolution, of names, we also recognize the Roman Janus as the equivalent of Anu and Ouranos, even though it is usually stated that Janus was unknown to the Greeks.<sup>9</sup> It is, however, not hidden from those who state as much that, even in ancient times, Janus was identified as Saturn—although it is also sometimes claimed that this was due to confusion.<sup>10</sup> But there really was no confusion about this.<sup>11</sup> As Joannes Lydus made it known, Janus was not only identified as Kronos, the very Greek god of the planet Saturn, by his own countrymen, he was actually called Saturnus.<sup>12</sup>

There will be those who will point to a definite distinction between the two deities since Janus was usually depicted as having possessed two heads. But while this is true, so was Ninurta, the Babylonian Saturn.<sup>13</sup>

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<sup>1</sup> A. Eaton, *The Goddess Anat: The History of Her Cult, Her Mythology and Her Iconography* (Yale University, 1964), p. 13.

<sup>2</sup> H. Wohlstein, *The Sky-God An-Anu* (Jericho, N. Y., 1976), p. 33.

<sup>3</sup> J. Morgenstern, *op. cit.*, pp. 15, 16; H. G. Güterbock, "The Hittite Version of the Hurrian Kumarbi Myths: Oriental Forerunners of Hesiod," *Supplement to American Journal of Archaeology*, Vol. LII (1948), p. 130.

<sup>4</sup> M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 47.

<sup>5</sup> *Ibid.*; E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), p. 180.

<sup>6</sup> M. (Rens) van der Sluijs, "Gods in the Flesh—Part Two," *Picture of the Day, thunderbolts.info* (March 19, 2008).

<sup>7</sup> E. Tonnelat, "Teutonic Mythology," *New Larousse Encyclopedia of Mythology* (London, 1972), p. 252.

<sup>8</sup> H. Tresman & B. Newgrosh (writing under the name B. O'Gheoghan), "The Primordial Light?" *S.I.S. Review* II:2 (December 1977), p. 37.

<sup>9</sup> A. S. Murray, *Manual of Mythology* (N. Y., 1950), p. 146.

<sup>10</sup> *Ibid.*

<sup>11</sup> A. Hislop, *The Two Babylons* (London, 1916), p. 271.

<sup>12</sup> Joannes Laurentius Lydus, *De Mensibus* 4:2.

<sup>13</sup> J. V. K. Wilson, *The Rebel Lands* (Cambridge, 1979), pp. 20, 63.; D. A. Mackenzie, *op. cit.*, p. 301.



Another god that was identical to Ouranos was the Indic Varuna.<sup>1</sup> And because this deity's name is said to have been derived from the Sanskrit word *var*, which means "to cover,"<sup>2</sup> he, too, has been understood as the embodiment of the covering sky,<sup>3</sup> although, to be sure, not everyone agrees.<sup>4</sup>

To the Incas, Saturn was known as Haucha, on which planet they blamed such misfortunes as pestilence, slaughter, famine, lightning, and thunder.<sup>5</sup> But also, while their prime god, Viracocha, is often presented as having been the same as Inti, who was the Sun, Jan Sammer has presented valid arguments for the proper identification of this god as the same Saturn.<sup>6</sup>

We cannot devote much more space to the universality of the Saturnian deity or we'll bound to get stuck in a chronological rut. Even so, as David Talbott noted, "the consistency with which early astronomies identify Saturn as the former creator-king is extraordinary."<sup>7</sup>

"The Zoroastrians of ancient Persia [he went on] knew Saturn as the heaven-sustaining Zurvan...The Iranian god-king Yima, a transcript of the Hindu Yama, founder of the Golden Age, was also linked to Saturn. The Chinese mythical emperor Huang-ti...mythical founder of the Taoist religion, was identified astronomically as the planet Saturn. Even the Tahitians recall the god Fetu-tea, the planet Saturn..."<sup>8</sup>

## DEISTIC DESIGNATION

I hate to have to return to Ellenberger's criticisms, but, for the sake of scholarship, certain matters should not be ignored. In this particular case, it becomes especially so since his most recent attacks as of this writing happen to concern the very primacy of the planet in question concerning which we have an awful lot to say in the following pages. As he has been asking all over the Internet, how could Saturn have been considered predominant among the planets by the Mesopotamians when, according to Morris Jastrow, it was not even given a specific name until *after* Venus and Jupiter were so distinguished?

Jastrow's above disclosure, however, concerns Babylonian astrological texts which, while quite useful in recovering certain aspects of ancient belief systems, are not themselves concerned with the prehistoric events that form our major thesis.<sup>9</sup> By the time these particular texts were written, the planets, once much closer, had already turned into the pin-points of

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<sup>1</sup> M. Müller, *op. cit.*, pp. 65, 179

<sup>2</sup> *Ibid.*, p. 65; E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 23.

<sup>3</sup> *Ibid.*; A. S. Murray, *op. cit.*, p. 379.

<sup>4</sup> M. Eliade, *op. cit.*, pp. 71, 72.

<sup>5</sup> J. N. Sammer, "The Cosmology of Tawantinsuyu," *KRONOS*, IX:2 (Winter, 1984), p. 26.

<sup>6</sup> *Ibid.*, pp. 26-28.

<sup>7</sup> D. Talbott, "Saturn: The Ancient Sun God," *THOTH*—electronic newsletter sponsored by KRONIA Communications—Vol. 1, No. 10 (April 22, 1997), p. 2.

<sup>8</sup> *Ibid.*

<sup>9</sup> See here M. Jastrow, Jr., "The Sign and Name for Planet in Babylonian," *Proceedings of the American Philological Society* (May-August 1908), p. 146.



Janus

light we now see in the night sky with the unaided eye. And since by this time Saturn had long settled on its far-distant orbit along which it now seems to inch along, it became one of the most difficult planets to keep track of. For that very reason, there are only a few astrological texts that even treat of this once prominent planet.<sup>1</sup> Additional to that, by this time, new names had been chosen by which to call the planets.<sup>2</sup> Mars was supplied with six alternative names,

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<sup>1</sup> A. F. O'D. Alexander, *op. cit.*, p. 42.

<sup>2</sup> M. Jastrow, Jr., *op. cit.*, p. 151.

while Jupiter received at least five.<sup>1</sup> Worse still, the prominence of specific planets in relation to astrological divination did not remain static through this period. A good example concerns the planet Mercury which, for a time, was considered by astrologers as “the planet *par excellence*,”<sup>2</sup> when in fact it is one of the most difficult planets to observe with the naked eye. This made Jastrow himself ask: “Why should Mercury have been assigned to this preeminent position among the planets?”<sup>3</sup>

The answer to that question had to do with the changing political and religious influence of Babylon as it gained ascendancy over the Euphrates valley region.<sup>4</sup> It was no different from the manner in which particular religions and all that went with them changed and/or gained prominence in various nations down through the ages. Previous to that, Mercury “was clearly the one that played the least significant role” in Babylonian astrology.<sup>5</sup>

When it came to the planet Saturn, the very opposite seems to have transpired. True enough, the name of Lu-Bat Sag-Uš—i.e., the Steady Planet<sup>6</sup>—was bestowed on Saturn sometime *after* the names Sag-Me Gar and Dil-Bat were respectively given to Jupiter and Venus.<sup>7</sup> But, at a different time, it was the very same Saturn that was considered the Lu-Bat, that is the planet, *par excellence*.<sup>8</sup>

An earlier designation for the planet Saturn was Ninib, a name that goes back beyond Babylonian times to the earlier Sumerian civilization.<sup>9</sup> All of which, incidentally, explains that while the planets were known as sheep—which is what the “Lu” in “Lu-bat” means<sup>10</sup>—Saturn’s prominence was additionally highlighted by the planet’s designation as *lulimu*—i.e., “ram.”<sup>11</sup> Diodorus Siculus was not wrong when he reported that Kronos/Saturn was considered the most prominent planet by the Chaldeans.<sup>12</sup>

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<sup>1</sup> A. F. O’D. Alexander, *op. cit.*, p. 44.

<sup>2</sup> M. Jastrow, Jr. *op. cit.*, p. 152 (emphasis as given).

<sup>3</sup> *Ibid.*

<sup>4</sup> *Idem*, “Sun and Saturn,” *Revue d’Assyriologie et d’Archeologie Orientale* (Paris, September 1910), p. 177.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*, p. 175.

<sup>7</sup> *Ibid.*, pp. 174 ff.

<sup>8</sup> *Ibid.*, p. 176.

<sup>9</sup> *Ibid.*, p. 172.

<sup>10</sup> *Idem*, “The Sign and Name for Planet in Babylonian” (see above), pp. 142 ff.

<sup>11</sup> *Ibid.*, p. 154.

<sup>12</sup> Diodorus Siculus, *Bibliotheca Historica*, II:30-34.

# Chapter 3

## Ab Initio

### SOVEREIGN GOD AND PLANET

**A**nthony Aveni, professor of astronomy and anthropology, wrote that we “need only to turn off the lights and go outdoors to discover what our predecessors saw in the sky.”<sup>1</sup> He could not have been more wrong.

The multidisciplinary Richard Thompson came a little closer to the truth when he claimed that: “We do not know by observation what the planets were doing thousands of years ago, and no two modern ephemeris programs will give exactly the same answers.”<sup>2</sup> To which he unfortunately added that “given uniformitarian assumptions” such calculations would “probably” be “not very far off.”<sup>3</sup> That, however, is precisely where the problem lies since the history of the planetary system in which we happen to abide does not lend itself to uniformitarian assumptions.

As we have proposed in our previous volumes, the planet we now know as Saturn commenced its heavenly career as a sub-brown-dwarf which, during man’s Paleolithic pursuit and for long ages before that, was the only heavenly body that could be seen in the sky.<sup>4</sup> The evidence for this proposal need not be repeated here, but in view of what we have declared in our last two chapters, certain issues should not be lost track of. It is, for instance, quite well known that Yahweh was proclaimed the sole sovereign of heaven, thereby excluding other deities from his unique creative role.<sup>5</sup> And while the origin of this belief is traceable to the traditional lore that was prevalent throughout the ancient Near East,<sup>6</sup> it was not restricted to that heritage. It therefore will not do to explain this belief’s distribution by resorting to diffusion from the same “cultural continuum.”<sup>7</sup> How would beliefs from the Near East have reached the Luiseño Indians of southern California? They, too, are known to have held that, in the beginning, the “only spirit at large” in what has been understood as “the universe” was the one called Alone-and-Empty<sup>8</sup>—which is what the name of their sovereign deity translates into. Or how about the natives of the Tuamotu Islands in the South Pacific? Did they not once

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<sup>1</sup> A. Aveni, *Conversing with the Planets* (Colorado, 2002), p. 33.

<sup>2</sup> R. L. Thompson, *Mysteries of the Sacred Universe* (Alachua, FL, 2000), p. 219.

<sup>3</sup> *Ibid.*

<sup>4</sup> *God Star*, pp. 192 ff.; *Flare Star*, p. 137.

<sup>5</sup> P. D. Hanson, “Rebellion in Heaven, Azazel, and Euhemeristic Heroes in Enoch 6-11,” *Journal of Biblical Literature* (June 1977), p. 203.

<sup>6</sup> *Ibid.*, pp. 202-203.

<sup>7</sup> M. A. van der Sluijs, “Gods and Planets,” Part 2, *Chronology & Catastrophism Workshop* (2003:2), p. 15.

<sup>8</sup> E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), p. 97.

believe—as some of them might still do—that Kiho was “the source of sources.” He “had no parents,” it was said of him and, originally, “there was none but him.”<sup>1</sup> It is one thing not to exclude the possibility that the Polynesians might have learned of such matters from the Hindus,<sup>2</sup> but quite another to authenticate it. While it is not impossible for ancient seafarers to have transmitted lore through island hopping from the south of India east into the South Pacific, one would expect some similarity between the collective beliefs of Polynesia and Brahminic Hinduism had this actually transpired. But, other than the foundational stratum that is common to all mythology, where is such correspondence to be found?

The world-wide belief in an original solitary deity, which has been mainly understood as an accentuation of God’s divine individuality, reflects the sole appearance of the proto-Saturnian planet in Earth’s primordial sky. In keeping with this postulate is the god Yahweh’s ancient identity as a personification of that very planet. Yes, critics will claim—and rightly so—that neither Kiho nor Alone-and-Empty are anywhere identified as an embodiment of the planet Saturn. But, even without Yahweh’s prime example, comparative mythology does enable us to do so.<sup>3</sup>

## STANDING STILL IN HEAVEN

In keeping with Saturn’s solitary appearance in man’s ancient sky, we also note the oft-repeated declaration concerning the planetary god’s immobility. Thus, the very Kiho mentioned above was associated with stability,<sup>4</sup> as so, also, was the very planet in question. Shab-tai, one of the Hebrew names for the planet Saturn,<sup>5</sup> also known as Kokab Sabet<sup>6</sup>—that is, the Sabbath Star<sup>7</sup>—means “the resting Star or Planet.”<sup>8</sup> Together with similar names and traits, this has quite often been attributed to ancient man’s awareness of the planet’s slow motion along its present orbit. A planet in slow motion, however, cannot be said to be at rest. As far as our ancient ancestors were concerned, the Saturnian planet was described as resting because it did not move from its place in the sky.<sup>9</sup>

There are two ways in which a celestial body can appear to be immobile from the surface of another. The most common of these requires one body to be phase-locked with its mate as in the case of our own natural satellite. As seen from the surface of the Moon’s near-side, Earth seems to be motionless overhead. Needless to say, it appears at different points in the sky from different localities of the lunar surface, while its rotation would be discernable to anyone up there. Other than that, however, its position would appear to be fixed.

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<sup>1</sup> D. Teresi, *Lost Discoveries* (N. Y., 2003), pp. 181-182.

<sup>2</sup> M. A. van der Sluijs, *loc. cit.*

<sup>3</sup> See here the evidence supplied in *God Star*, pp. 192 ff.

<sup>4</sup> D. Teresi, *op. cit.*, p. 182.

<sup>5</sup> W. A. Heidel, *The Day of Yahweh* (N. Y., 1929), p. 465.

<sup>6</sup> R. H. Stieglitz, “The Hebrew Names of the Seven Planets,” *Journal of Near Eastern Studies* 40:2 (April 1980).

<sup>7</sup> W. A. Heidel, *loc. cit.*

<sup>8</sup> R. H. Stieglitz, *loc. cit.*

<sup>9</sup> Evidence supplied in *God Star*, pp. 204 ff.; *Flare Star*, pp. 137-139.

The other way is to have both bodies in axial coupling, with both of them sharing the same axis of rotation. From a terrestrial point of view, this type of alignment would have consigned proto-Saturn to one of Earth's celestial poles. As the mytho-historical record more than implies, the pole in question would definitely have been the northern one.<sup>1</sup>

The plethora of mythic themes associated with the north, and especially the north pole, has been noted by various authors.<sup>2</sup> Much of what was written on this subject in the past is however tainted by the brush of ignorance. An exception to this sort of treatment was the two-volume exposition by the retired British civil servant John O'Neil. Written toward the end of the nineteenth century, O'Neil's treatise came much closer to the truth. What this monumental enterprise proclaimed is that the Most High God that had been worshipped across the ancient world had been seated "at the Highest celestial spot of the cosmos," which O'Neil recognized as "the North Pole of the heavens," and was thus simply "the God of the Pole Star."<sup>3</sup>

The location of the ancient supreme deity "at the heavenly pole," as Marinus van der Sluijs himself noted, is quite obvious from descriptions in the Egyptian *Pyramid Texts*.<sup>4</sup> So also with certain *Coffin Texts* from the same ancient civilization, one of which relates that the "Great God lives, *fixed* in the middle of the sky..."<sup>5</sup> A god that is *fixed* in the middle of the sky has to be an immobile one. A pyramid text refers to this god as "the greatest of those who are in the northern sky,"<sup>6</sup> while another coffin text describes him as sitting, which again means unmoving, "in the supreme place in the sky."<sup>7</sup>

An immobile deity that sat fixed in the middle of the supreme place in the northern sky has to have been seated at Earth's north celestial pole. As Rundle Clark well understood: "The doctrines of Heliopolis and Hermopolis are woven together to form a background for a transcendent God who presides over the cosmic circuit of stars *from the top of the heavenly pole*."<sup>8</sup>

That the Egyptian Osiris was a star-god, sometimes even presented as a solar one, is not a new revelation.<sup>9</sup> Nor will it do for Rundle Clark to claim that the passions of this deity were transformed "from a local to a cosmic level,"<sup>10</sup> since this would simply be Euhemerism in reverse. To Norman Lockyer, the Egyptian Osiris was mysterious enough to be ambiguously identified as "Any Celestial Body Becoming Invisible."<sup>11</sup> He even identified him as the planet

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<sup>1</sup> Again see *God Star*, pp. 220 ff. and *Flare Star*, pp. 139-145 for evidence of this.

<sup>2</sup> See here, for instance, J. Godwin, *Arktos: The Polar Myth in Science, Symbolism, and Nazi Survival* (London, 1993), p. 7.

<sup>3</sup> J. O'Neil, *The Night of the Gods: An Inquiry into cosmic and Cosmogonic Mythology and Symbolism*, Vol. I (London, 1893), p. 486.

<sup>4</sup> M. A. van der Sluijs, "The World Axis as an Atmospheric Phenomenon," *Cosmos: The Journal of the Traditional Cosmology Society*, 21 (2005), p. 40

<sup>5</sup> R. T. R. Clark, *Myth and Symbol in Ancient Egypt* (London, 1978), p. 59 (emphasis added).

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

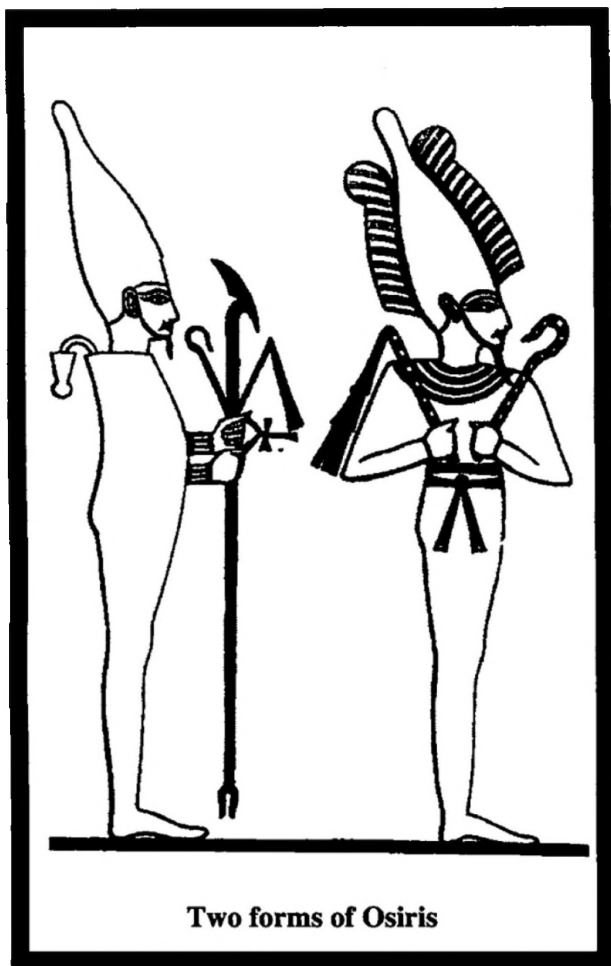
<sup>8</sup> *Ibid.*, p. 58 (emphasis added).

<sup>9</sup> See, for instance, E. A. W. Budge, *From Fetish to God in Ancient Egypt* (N. Y., 1934/1988), p. 279.

<sup>10</sup> R. T. R. Clark, *op. cit.*, p. 164.

<sup>11</sup> J. N. Lockyer, *The Dawn of Astronomy* (Cambridge, Massachusetts, 1894/1973), p. 296.





Venus,<sup>1</sup> but also the setting Sun as well as the Moon.<sup>2</sup>

“We gather...that the wonderful old-world myth of Isis and Osiris is astronomical from beginning to end [he wrote], although Osiris in this case is not the sun, but the [waning] moon [which] is supposed to be dying from the time of full moon to new moon. The Egyptians in their mythology were nothing if not consistent; the moon was called Osiris from the moment it began to wane, as the sun was Osiris as soon as it began to set. A constellation paling at sunrise was also Osiris.”<sup>3</sup>

Thus, according to him:

“...the mythology connected with Osiris is simply the mythology connected with any celestial body becoming invisible. We have the sun setting, the moon waning, a planet setting, stars setting, constellations fading at dawn.”<sup>4</sup>

Such confusion was abetted by the fact that Osiris was by the Egyptians themselves considered a different aspect of the god Ra,<sup>5</sup> who is identified by almost all mythologists as a personification of the Sun despite the fact that Ra’s characteristics do not match those of the solar orb.<sup>6</sup> And, whether it has meaning or not, just as the Babylonian planet Saturn was referred to as *lulimu*—that is, “ram”<sup>7</sup>—so was Ra sometimes depicted with the head and horns of the same animal.<sup>8</sup> For that matter Osiris, too, was sometimes portrayed with the horns of a ram.<sup>9</sup>

<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, p. 295.

<sup>3</sup> *Ibid.*, p. 297.

<sup>4</sup> *Ibid.*, p. 299.

<sup>5</sup> H. L. McCarthy, “Place of the Beautiful Ones,” *Archaeology Odyssey* (March/April 2005), p. 23.

<sup>6</sup> *God Star*, pp. 24-26.

<sup>7</sup> M. Jastrow, Jr., “The Sign and Name for Planet in Babylonian,” *Proceedings of the American Philosophical Society* (May-August 1908), p. 154.

<sup>8</sup> J. Viaud, “Egyptian Mythology,” *New Larousse Encyclopedia of Mythology* (London, 1972), p. 19; F. Fleming, “The Throne of Osiris,” *The Way to Eternity* (London, 1997), p. 102.

<sup>9</sup> See E. A. W. Budge, *The Gods of the Egyptians*, Vol. 2 (N. Y., 1904/1969), opposite pp. 114 & 136.

Ra and Osiris are even depicted as a single deity in the *Papyrus of Ani*,<sup>1</sup> as well as in the tomb of Ramses II,<sup>2</sup> and that of Nefertari in the Valley of the Queens.<sup>3</sup>

That Osiris could not have personified the setting Sun, the waning Moon, the setting of stars, or fading constellations, is borne out by the fact that he was said to have been sanctified in Earth's *northern* sky from where he ruled the *imperishable stars* which furnished his very abode.<sup>4</sup> Besides which, an Egyptian ostrakon identifies Ra, with whom Osiris was assimilated, as the Greek planetary god Kronos/Saturn.<sup>5</sup> And while—yes, I agree—this comes from a “late” Ptolemaic source, there is no doubt that it conforms with much earlier beliefs.<sup>6</sup>

Thus, as pointed out in our previous work,<sup>7</sup> the Egyptian dead were believed to rise and join their god at the north pole. As a chapter in the *Book of the Dead* relates, on their way to the Hall of Double Justice, the dead had to pass the “constellations around the Pole.”<sup>8</sup> Dead men were then given the key to the North Wind “which was essentially the property of Osiris,”<sup>9</sup> but also of Atum.<sup>10</sup> And that Atum was just one other name for the Saturnian deity need not be repeated.<sup>11</sup> Not only that, but the mythological North Wind was itself inseparable from the proto-Saturnian system we have been reconstructing.<sup>12</sup>



Ra—shown here with ram's head and horns

<sup>1</sup> R. T. R. Clark, *op. cit.*, p. 158.

<sup>2</sup> *Ibid.*, pp. 158-159.

<sup>3</sup> H. L. McCarthy, *op. cit.*, p. 22.

<sup>4</sup> M. Lichtheim, *Ancient Egyptian Literature—Vol. II: The New Kingdom* (Berkeley, 1976), p. 82.

<sup>5</sup> F. Boll, “Kronos-Helios,” *Archiv für Religionswissenschaft*, XIX (1916-1919), pp. 343 ff.

<sup>6</sup> *God Star*, pp. 133 ff.

<sup>7</sup> *Ibid.*, pp. 230-231.

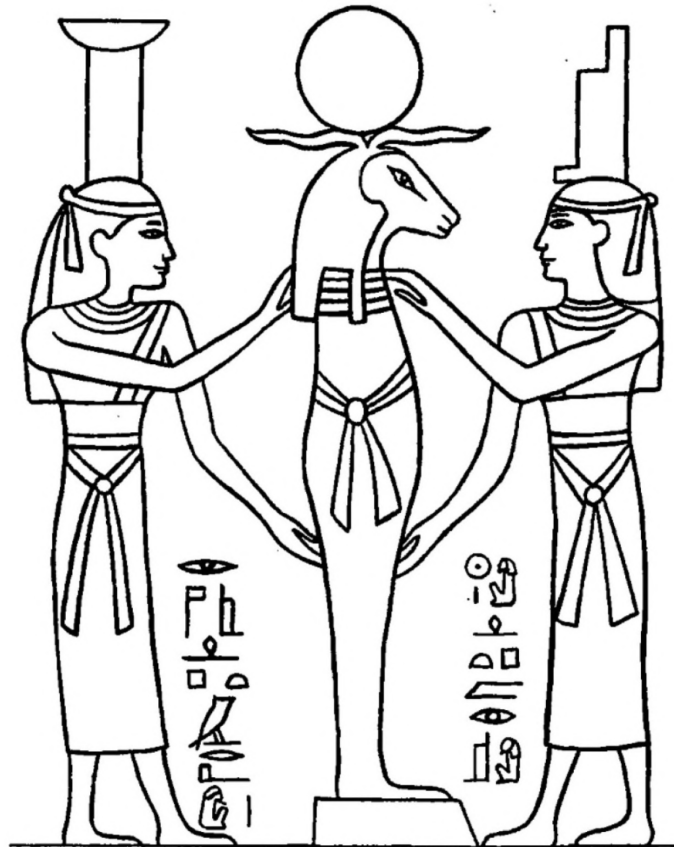
<sup>8</sup> R. T. R. Clark, *op. cit.*, p. 163.

<sup>9</sup> *Ibid.*, p. 164.

<sup>10</sup> *Ibid.*, p. 174.

<sup>11</sup> See *God Star*, pp. 141-145, 165-168, 193-195, 214-216, 230-231, 274-276, 311, 433-438, 443, 451.

<sup>12</sup> See *ibid.*, pp. 433-437, 462.



Osiris and Ra as one god, sustained by Nephthys and Isis,  
as depicted in the tomb of Ramses II.

But let's move out of Egypt. Among the Hindus, the supreme deity known as Brahma, identified as Saturn by one group of Indian sages,<sup>1</sup> is also described as having been "alone" in the center of heaven.<sup>2</sup>

The Chinese Supreme Ruler of Heaven, known as Shang-ti (Shang-te or Shang-di), whose Saturnian identity is no secret, was euhemerized as the Yellow Emperor.<sup>3</sup> Like other such heavenly rulers in other parts of the ancient world, he had his throne placed at Earth's north celestial pole.<sup>4</sup> It was for that very reason that, during ceremonies inaugurated in honor of this god at the Altar and Temple of Heaven, the officiating Chinese emperor had to face toward the north while confessing that he was inferior to Heaven—even though to Heaven alone.<sup>5</sup>

<sup>1</sup> E. Moor, *Hindu Pantheon* (London, 1864), p. 218; but see also *God Star* (check index under Brahma).

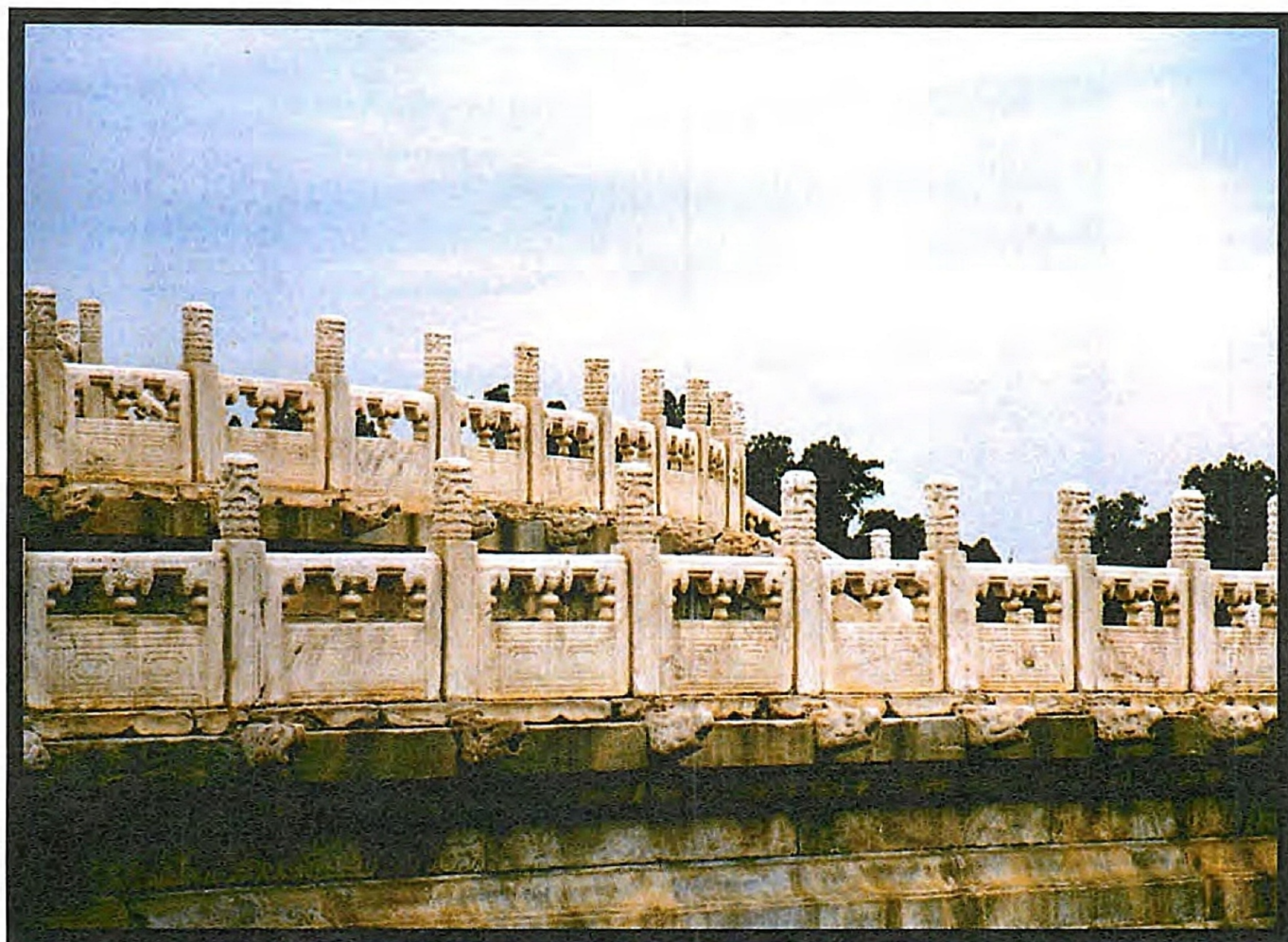
<sup>2</sup> *Chandogya Upanishad*, III:ii:1-3.

<sup>3</sup> H. Maspero, "The Mythology of Modern China," *Asiatic Mythology* (N. Y., 1972), p. 332; G. de Santillana & H. von Dechend, *Hamlet's Mill: An Essay on Myth and the Frame of Time* (Boston, 1969), p. 129.

<sup>4</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 281.

<sup>5</sup> F. S. Dobbins, *Error's Chains: How Forged and Broken* (N. Y., 1884), pp. 463-464; J. N. Lockyer, *op. cit.*, pp. 88-89.





**The Altar of Heaven, Beijing, where the officiating Chinese emperor had to face north during the festival held in honor of the Saturnian deity known as Shang-ti.  
(Photograph by the author.)**

It was not that much different in Japan. The name of the original deity named in what can pass as that nation's Bible, the *Kojiki*, is Ame-no-mi-naka-nushi-ro-kami, which translates as Lord of the Centre of Heaven (or Master of the August Center of Heaven), who existed during the time of chaos.<sup>1</sup> That the north pole is implied by this Center of Heaven is ascertained by the locality of the deity's celestial residence. As with ancient China, Japan's palace of the gods was also placed at Earth's north pole—even though, as with such other sites, it was eventually terrestrialized into the one at Eshima.<sup>2</sup>

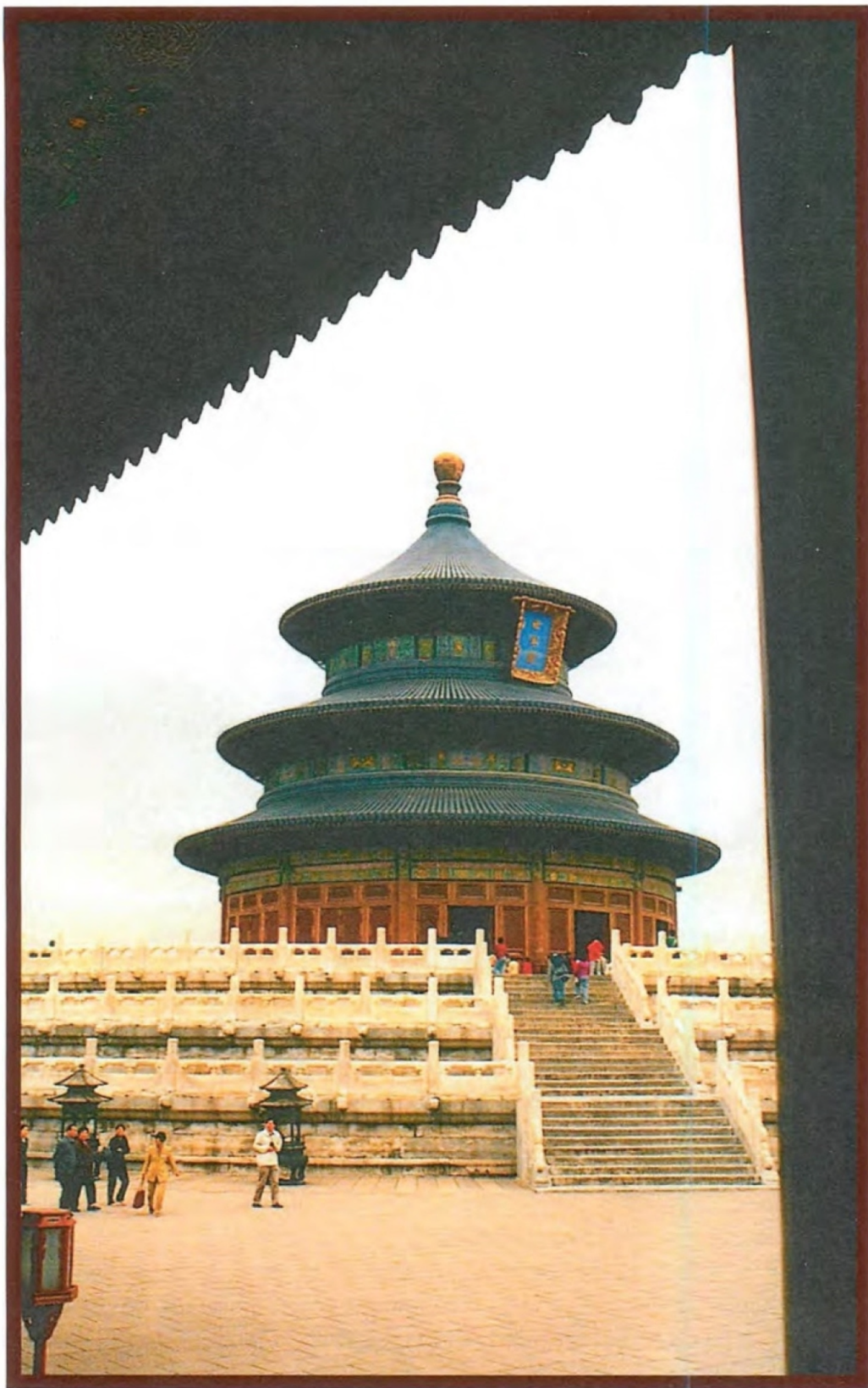
We cross over to America in search of Saturn even though there are those who have doubted the existence on that continent of any documentary evidence of the Saturnian planetary deity.<sup>3</sup> David Kelly, on the other hand, had no qualms in presenting the "old black god of

<sup>1</sup> E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), pp. 198-199; F. S. Dobbins, *op. cit.*, p. 307

<sup>2</sup> F. S. Dobbins, *op. cit.*, pp. 308-309.

<sup>3</sup> E. Cochrane, "Actors in a Cosmic Drama," *AEON*, VII:1 (September 2006), p. 49.





**The Temple of Heaven, Beijing, center of Shang-ti/Saturn worship.  
(Photograph by the author.)**

the number seven” as “the god of the planet Saturn.”<sup>1</sup> In fact, for reasons we shall have to leave for a later chapter of this work, the color black was associated with the god and planet in question in the myths and astronomical lore of various ancient nations<sup>2</sup> where Saturn was often alluded to as the “dark” or “black” planet.<sup>3</sup> And, as we shall show in a future volume, so was the number seven especially associated with the same planetary deity. It can therefore be safely stated that a god who incorporates both these Saturnian characteristics—the color black and the number seven—can only be thought of as representing that very planet.

In his avian incarnation, Itzam-Yeh was also associated with the same number, as his alias of Waqub-Kaqix—that is, Seven-Macaw—indicates. In this respect, Ken Moss has ably shown that Itzam-Yeh was another Mayan version of the proto-Saturnian deity.<sup>4</sup> An additional verification of this identity is the fact that, as with other Saturnian deities, Itzam-Yeh’s “principal place of residence” was “at the center of the north.”<sup>5</sup>

### DIRECTIONAL PORTRAYAL

Early on, van der Sluijs was of the opinion that, “for some time,” Earth was “in polar alignment” with the non-planetary bodies he believed the configuration in question consisted of.<sup>6</sup> But, in later years, he changed his mind. What he then started to declare was that, in the earliest of times, mythology had merely alluded to a vague region in the sky which was referred to by such terms as the “middle,” “navel,” or “heart” of heaven. According to him, this location was “not specifically” said to have been at the pole.<sup>7</sup> As far as he was concerned, the mythological locality of this region, sometimes said to have been at the “top of the world,” would have been “retrospectively re-interpreted” as the celestial north pole at a much later time.<sup>8</sup> Even when it comes to the *Pyramid Texts*, in which he had originally found reference to the heavenly pole,<sup>9</sup> he later thought it “more likely” that the word translated as “pole” actually meant “centre” or “zenith.”<sup>10</sup>

Does one, however, really expect to find the term “north pole” in relation to the time in question? Think about it. We are so used to such modern expressions that we expect our ancient forefathers to have been just as cognizant of their existence and their meanings. But

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<sup>1</sup> D. H. Kelly, “Planetary Data on Caracol Stela 3,” in A. Aveni (Ed.), *Archaeoastronomy in Pre-Columbian America* (Texas, 1975), p. 259.

<sup>2</sup> J. Schaumberger, *Sternkunde und Sterndienst in Babel* (Munster, 1935), p. 317; al-Biruni, *Kitab at-Tafhim* (ed. R. Ramsay Wright, London, 1934), p. 240; D. Cardona, “Child of Saturn,” Part III, *KRONOS* VII:3 (Spring 1982), p. 8, where other sources are cited.

<sup>3</sup> H. Lewy, “Origin and Significance of the Mâgên Dâwîd,” *Archiv Orientalni* 18, Pt.3 (1950), pp. 339, 348.

<sup>4</sup> K. Moss, “Maya Cosmos: A Saturnian Interpretation,” *AEON* VI:1 (February 2001), pp. 84 ff.

<sup>5</sup> *Ibid.*, p. 84.

<sup>6</sup> M. A. van der Sluijs, “Gods and Planets,” *Chronology & Catastrophism Workshop* (2003:1), p. 14.

<sup>7</sup> *Idem* (writing under the name Rens van der Sluijs), “Ancient Traditions: What Can They Tell Us About the History of the Earth?” *Chronology & Catastrophism Review* (2008), p. 58.

<sup>8</sup> See here “Discussion, Answers and Questions Session,” in *ibid.*, p. 66.

<sup>9</sup> See back to page 45.

<sup>10</sup> A. M van der Sluijs, on the private Plasmascience electronic discussion group (September 19, 2008), cited with permission.



what would a person from the Paleolithic Age have called that special location in which the body of our study would have hung immobile in the sky? Would such words have any directional meaning *to us*? Even in later times, when the concept of a north pole *did* become well known and understood, the ancient words for that locality remained in vogue. Take Hebrew, for example, which belongs to one of the oldest language groups that we know of. The word for “north” in that language is *tsaphon* (sometimes rendered *saphon*). But what does the word *really* mean? It means “hidden” and/or “dark”—“gloomy” and “unknown”—derived from a primitive root which means “to hide” or “to cover.”<sup>1</sup> Is that a word that brings the north to mind? It might—but only to those who are aware that the celestial locality in question was once permanently occupied by proto-Saturn who had from dim antiquity been known as the dark or black planet. In fact, Saturn aside, the color black was associated with the north by various nations.<sup>2</sup>

Or take Arabic—another tongue belonging to the ancient Semitic branch. The word for “north” in that language is *shmâl* and/or *shemâl*, which words really mean “left.”<sup>3</sup> Even in Maltese, the language of this author, the north wind is called *xmiel*—pronounced *shmeel*—from the same Semitic root, which word also means “left.” Except to those who happen to know the origin of the term, these words would hardly connote the north. The usage, of course, derived from later times when directions were expressed by facing the point of the rising Sun where the north was to one’s left.<sup>4</sup>

Had it not been that words like *tsaphon*, *shmâl*, *shemâl*, and *xmiel* continue to be used—had they belonged to some dead language—they would not easily have been understood as meaning “north.” Compare those terms to “middle,” “centre,” “navel,” and “heart of heaven,” or better still “top of the world,” and tell me they are not more appropriate to signify the north celestial pole. In fact, what better words could our ancestors have really used?

Expressions aside, there was no visible center of celestial rotation to mark any terrestrial poles during the Paleolithic Age. The stars that would have been seen rotating around this center were not visible, as ancient man himself has amply stressed.<sup>5</sup> How, then, following its displacement, would those original eye-witnesses have passed on the location of their planetary deity to later generations? They did so by simply pointing in the right direction. As they would have said: “*There* is where it was.” It would even have been simpler when the once-invisible stars finally made their appearance. The narrators of ancient events could point to the Pole Star and claim that “*there* is where it was...in the place of *that* star around which the other stars move...but bigger...and brighter...much brighter.”

Nor am I putting words into our ancestors’ mouths, as a parable told by the Hindus well illustrates. As contained in the *Linga Purana*, this parable tells how Dhruva *became* the Pole Star.<sup>6</sup> As there recounted, Dhruva was placed at his station by Vishnu, who was one of the

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<sup>1</sup> J. Strong, *Dictionary of the Hebrew Bible* (Madison, N.J., 1890), pp. 100-101.

<sup>2</sup> C. Calloway, *et al.*, *Through Indian Eyes* (Montreal, 1996), p. 111.

<sup>3</sup> Check any Arabic dictionary.

<sup>4</sup> See here also *God Star*, pp. 225-227.

<sup>5</sup> *Ibid.*, pp. 274 ff.

<sup>6</sup> *Linga Purana* I:62:1 ff.

*avatars* of the Saturnian planetary deity.<sup>1</sup> But, more than that, Vishnu tells Dhruva that the abode in which he placed him had formerly been his. “This abode,” Vishnu is made to state, “is *mine*, the greatest, the steady splendid abode.”<sup>2</sup> And, to be sure, Dhruva, which is the Sanskrit designation of the Pole Star, was also one of Vishnu’s names.<sup>3</sup>

There will, of course, be those who will claim that the *Puranas* are of very late provenance. But does “late” necessarily mean “false”? Late as they might be, it is well known that these tracts contain ancient material.<sup>4</sup> The very word *purana* signifies “old” and was originally applied “to prehistoric, especially cosmogonic, legends.”<sup>5</sup> Paleolithic man, during whose time on Earth the events in question came to pass, had no written language. As already noted, both in this and our earlier works, memories of past events were transmitted from one generation to the next by word of mouth. In the end, there came a time when these tales could be told in writing. No matter when this transpired in whatever culture, it would definitely have been “late” in time. The ancients themselves were quite cognizant of this. Thus the Babylonians could speak of “the black Saturn” as an entity of the past, who had by then become “the ghost of the dead sun.”<sup>6</sup> They would have had no reason to think of Saturn in such terms by looking at the pin-point of light in the night sky that the planet, as seen from Earth, had by then become.

Even so, as we noted in our prequels, evidence for our proposals cannot rest merely on these ancient memories. Thus all those who deny proto-Saturn’s former station in Earth’s north celestial pole have to counter the scientific evidence that upholds our developing thesis.

### EARTH’S NORTH CELESTIAL POLAR SUN

There have been various items concerning odd discoveries scattered through the scientific literature over the years that never quite made international headlines despite the fact that they should have done much more than that. Oddities have always required elucidation and although various explanations have been offered for the peculiarities relative to our study, all of them have been offered in isolation simply because there was no unifying theory to tie most of them together in a comprehensive manner.

It has, for starters, been surmised that the infant Sun during Earth’s early history was only from 70 to 75 percent as bright, and therefore 70 to 75 percent as hot, as it is today.<sup>7</sup> One problem this entailed had to do with the mechanism that would have kept Earth warm enough

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<sup>1</sup> See *God Star*, pp. 233, 236, 246, 310, 440, 449, 451 where various references are cited.

<sup>2</sup> *Linga Purana* I:62:36 (emphasis added).

<sup>3</sup> V. S. Apte, *The Practical Sanskrit-English Dictionary* (Delhi, 1975), p. 531.

<sup>4</sup> H. Zimmer, *Myths and Symbols in Indian Art and Civilization* (Princeton, 1974), p. 178.

<sup>5</sup> H. J. Eggeling & J. Allan, “Sanskrit Language and Literature,” *Encyclopaedia Britannica* (1959 edition), Vol. 19, p. 963.

<sup>6</sup> D. A. Mackenzie, *Myths of Babylonia and Assyria* (London, 1915), re-issued as *Mythology of the Babylonian People* (London, 1996), p. 314.

<sup>7</sup> R. Boling, “The Faint Young Sun,” *Earth* (June 1996), p. 11; S. M. Clifford, “The Iceball Next Door,” *Sky & Telescope* (August 2003), p. 33; J. Trefil, “Earth’s Fiery Start,” *Astronomy* (December 2007), p. 36; R. Talcott, “Earth’s Troubled Adolescence,” *Astronomy* (May 2008), p. 35; D. Pendick, “New Greenhouse Solution Keeps Early Earth Warm,” *Astronomy* (October 2008), p. 26.

to keep the oceans from freezing. That much we had already noted and discussed in our previous volumes.<sup>1</sup> It has since then been assumed that, in those early times, Earth would have retained its heat due to a greenhouse effect.<sup>2</sup> A revival of an old theory, this had blamed carbon dioxide for keeping Earth's early atmosphere "relatively balmy." In its earlier form, this theory had called for vast amounts of this particular gas in order for it to do what was required. Since, however, no geological evidence was ever discovered for this vast quantity, it is now presumed that the amounts could have been much less.<sup>3</sup> But whether more or less, carbon dioxide can only trap heat in the atmosphere if there is heat in the atmosphere to trap. Thus even if this particular theory ever proves to be correct, it would still entail a dimmer Sun in Earth's primordial past, which is why the theory was thought to be required in the first place.

Another problem concerns the inception of life on Earth, considered to have been reliant on high levels of ultraviolet radiation.<sup>4</sup> Yet it has never been ascertained how Earth could have been bathed in higher levels of ultraviolet radiation than at present when the ultraviolet radiating source, that is the Sun, is claimed to have been much dimmer than at present?

What we, with others, have for many years been proposing is that Earth's primordial source of heat was a much less massive and dimmer brown dwarf star to which Earth was bound as its satellite while traveling alone through space outside the demarcation of the Solar System. Earth's dim source of heat and light during its primordial age is thus accounted for, while the high levels of ultraviolet radiation needed for the inception of life is amply met since brown dwarf stars emit highly in that very spectrum.<sup>5</sup>

The most mysterious geological region on Earth has to be the Arctic Circle. Entirely covered by ice all year round, one would expect the region to have been even more ice-bound during past ice ages. How is it then that geological evidence from the area indicates that, during all of Earth's past glaciations, the Arctic Circle was entirely free of ice? This is a situation that has been known and commented upon by various authorities since the nineteenth century.<sup>6</sup> Not only were these regions free of ice, they actually basked in a sub-tropical climate, something that even Charles Lyell, the father of uniformitarianism, was compelled to acknowledge.<sup>7</sup> With miles-deep ice in more southern latitudes, the only way in which the Arctic Circle could have remained free of ice was if there really had been a source of heat stationed right above. This is additionally intimated by evidence which indicates that Arctic regions were not only warmer than at present during past geological ages, they were even warmer than more southerly regions, in fact warmer than anywhere else on Earth.<sup>8</sup> These regions were originally covered with luxurious forests, the remains of which continue to baffle

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<sup>1</sup> *God Star*, p. 295, where other sources are cited; D. Cardona, *Primordial Star* (Victoria, British Columbia, 2009)—henceforth merely *Primordial Star*—pp. 10-12.

<sup>2</sup> D. Pendick, *loc. cit.*

<sup>3</sup> *Ibid.*

<sup>4</sup> V. A. Firsoff, *Life, Mind and Galaxies* (London 1967), p. 64; T. Palmer, in reviewing C. E. Fulsome's *The Origin of Life* in *S.I.S. Review* V:2 (1980/81), p. 61; *Primordial Star*, pp. 15 ff.

<sup>5</sup> W. Thornhill, "Stars in an Electric Universe," *AEON* V:5 (January 2000), p. 48.

<sup>6</sup> See *Flare Star*, pp. 80-88, where numerous sources are cited.

<sup>7</sup> C. Lyell, *Principles of Geology*, Vol. I (1830-1876, 11<sup>th</sup> edition), p. 231.

<sup>8</sup> R. A. Kerr, "How to Make a Warm Cretaceous Climate," *Science* (February 17, 1984), p. 677.





**The ice-bound mountains of Greenland's Arctic which was free of ice during Earth's past ice ages.  
(Photograph by the author.)**

paleontologists. The large size of the leaves discovered in these forests led Leo Hickey to a conclusion that he himself believed impossible, that these forests “grew under conditions of continuous light.”<sup>1</sup> Together with Mary Dawson, Hickey has uncovered reliable evidence that these trees and vegetation had appeared in Arctic regions millions of years before their kind appeared further south.<sup>2</sup> In 1996 Mark Harrison could announce to the world that the earliest signs of life that had so far been detected came from within the Arctic Circle. And while this announcement came under severe attack,<sup>3</sup> sediments which are said to contain the earliest evidence of life have more recently been discovered at Isua in southwestern Greenland.<sup>4</sup>

Dinosaurs thrived for millions of years—and, as strange as it may sound to most, they thrived mostly in the Arctic. Dinosaur remains have been found in Alaska's North Slope

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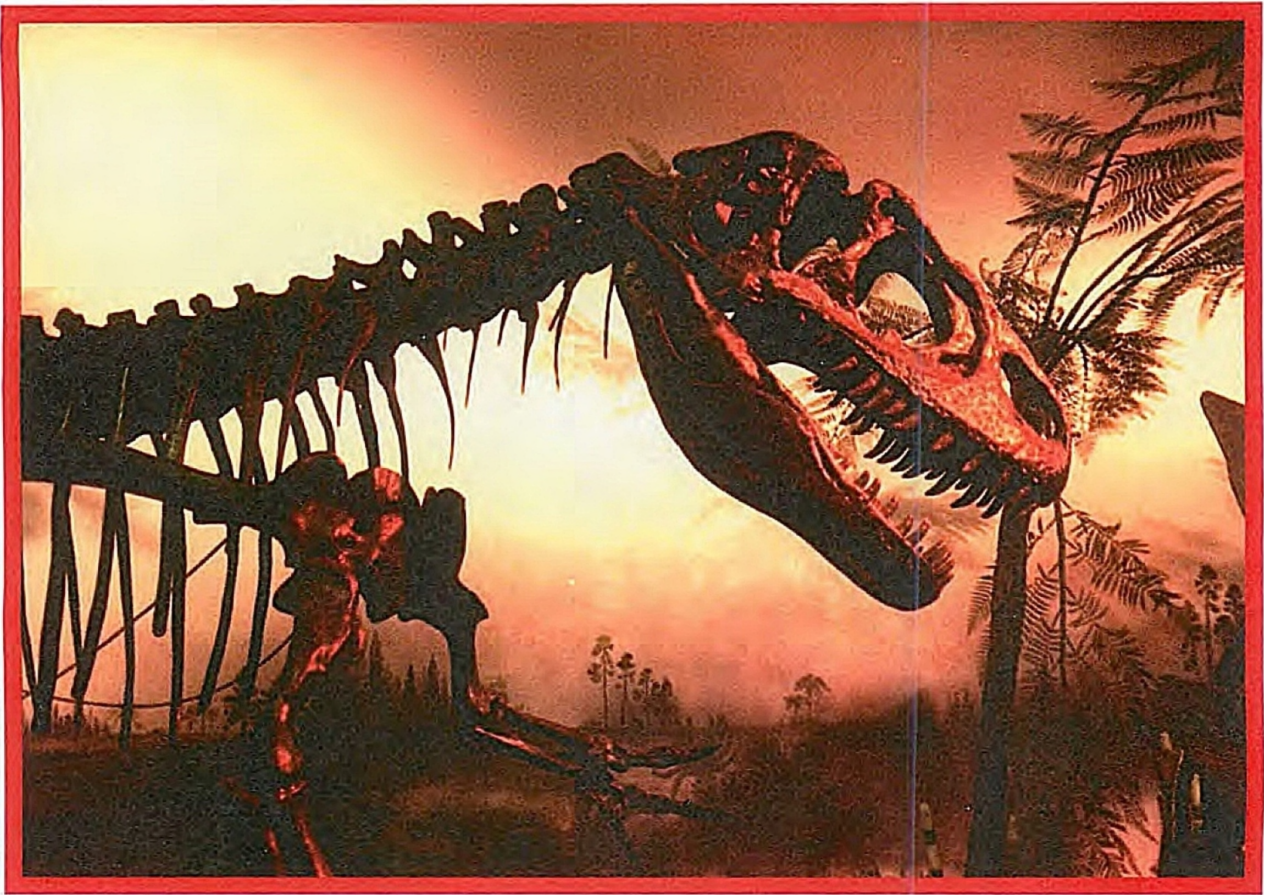
<sup>1</sup> “The Eocene Climate Puzzle,” *Chronology & Catastrophism Workshop* (1989:1), p. 28.

<sup>2</sup> H. Thurston, “Icebound Eden,” *Equinox* (May-June 1986), pp. 74, 80, 81.

<sup>3</sup> M. Harrison, “In Search of Akilia's Heel: The Controversy Over the Earliest Evidence for Life on Earth,” paper given at the seminar sponsored by the School of Earth Sciences at the Australian National University, September 25, 2003.

<sup>4</sup> J. W. Valley, “A Cool Early Earth,” *Scientific American* (October 2005), p. 60.





**Dinosaurs thrived mostly in Earth's Arctic region.**  
(Photograph by the author—courtesy of the Royal Ontario Museum, Toronto, Canada.)

within the Arctic Circle,<sup>1</sup> and even deeper within the Circle on Bylot Island, off the north coast of Baffin Island.<sup>2</sup> Polar dinosaurs were eventually discovered at 15 different Arctic sites.<sup>3</sup> By the turn of the twentieth century, what was considered as possibly the densest concentration of dinosaur fossils in the entire world had come to light within the same Arctic Circle.<sup>4</sup> All sorts of theories have been proposed to account for the manner in which these beasts could have thrived within the confines of such a cold regime with more than half the year immersed in perpetual darkness.<sup>5</sup> No viable evidence could however be mustered for any of these suggestions. What this means is that dinosaurs thrived best within Earth's Arctic regions and this, again, calls for an entirely different directional heat source.

The sub-tropical nature of the Arctic's past climate is also evidenced by the remains of reptiles and mammals that followed the demise of the dinosaurs. Among other animals, we are here talking about crocodiles and alligators, a class of reptiles that have been consistent

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<sup>1</sup> B. Rensberger, "A Fiery Extinction," *Science Digest* (January 1986), p. 22.

<sup>2</sup> I. C. Johnson, "Antarctic Anomalies," *AEON* II:1 (June 1989), p. 127.

<sup>3</sup> R. Gore, "Dinosaurs," *National Geographic* (January 1993), p. 38.

<sup>4</sup> S. Senkowsky, "Cretaceous Park," *Scientific American* (December 2002), p. 26.

<sup>5</sup> R. Gore, *op. cit.*, pp. 36, 38.



throughout their evolutionary history in their limited tolerance to cold.<sup>1</sup> Among this wildlife were the ancestors of the horse and rhinoceros, giant lizards, land tortoises, salamanders, snakes, even flying lemurs and tapirs,<sup>2</sup> to say nothing of parrots<sup>3</sup>—the descendants of which now live in equatorial forests—all of which testify to the warmth of the climate during the Eocene epoch. So, also, do the remains of palm trees and huge exotic ferns.<sup>4</sup>

To all that one can also add the discovery of human Stone Age settlements during the last Ice Age in the New Siberian Islands, as well as Spitzbergen, archipelagos which are presently much too cold for general habitation.<sup>5</sup>

With a different, although dimmer, sun suspended permanently, and much closer, in Earth's north celestial pole, the Arctic region would have received perpetual light and heat with no intervening months of cold and darkness. Not only dinosaurs, but all creatures that had preceded and followed them on the evolutionary stage would have proliferated without the need to hibernate or migrate to other regions since there would have been no onset of cold weather.

Fair enough, there is ample evidence that, in ages past, Antarctica had also thrived in unglaciated warmth,<sup>6</sup> where even dinosaurs seem to have roamed around in an ice-free environment,<sup>7</sup> but this transpired during those long balmy periods between ice ages. No part of the continent was ever free of ice during periods of glaciation in other parts of the world.<sup>8</sup> There was, needless to say, no south celestial polar sun shining above Antarctica.

### THE DIMMER LIGHT ENVIRONMENT

That Earth once basked beneath a dimmer sun was not unknown to ancient man. He transmitted enough memories of the darkness which ensued before Creation. In the main, mythologists remain awash in an ocean of confusion when they try to fathom what really lies behind this myth of myths. Post Wheeler, for example, was naïve enough to believe that, in the tale of Creation that followed the primordial darkness with which the Japanese *Nihongi* opens, one recognizes “the primal myth” of what science was later to understand as “the true process of cosmic creation.”<sup>9</sup> And so, too, Edwin Krupp who, much later, could best see the Luiseño entity Alone-and-Empty, whom we have already met, as an embodiment of “the universe itself”<sup>10</sup>—as if the ancestors of these Amerinds really had a concept of the Universe-at-large.

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<sup>1</sup> I. C. Johnson, “Anomalous Occurrence of Crocodilia in Eocene Polar Forests,” *Chronology & Catastrophism Review* XIV (1992), p. 7.

<sup>2</sup> *Ibid.*; “The Eocene Climate Puzzle,” *Chronology & Catastrophism Workshop* (1989:1), p. 27.

<sup>3</sup> “Parrot Fossil 55 Million Years Old Discovered in Scandinavia,” *ScienceDaily.com* (May 20, 2008).

<sup>4</sup> “Fossils Date the Tilt of Earth's Axis,” *Globe & Mail* (June 8, 1984).

<sup>5</sup> *Sputnik* (November 1968), p. 54, as quoted by C. H. Hapgood, *The Path of the Pole* (N. Y., 1970), p. 102.

<sup>6</sup> B. Bryson, *A Short History of Nearly Everything* (Canada, 2003), p. 432; *God Star*, pp. 361 ff., where various sources are cited.

<sup>7</sup> R. Gore, *op. cit.*, pp. 36, 38; Kim Hill's Programme, *Radio New Zealand* (July, 1999), as quoted in *Chronology & Catastrophism Review* (1999:2), p. 39.

<sup>8</sup> See *Primordial Star*, pp. 311, 322, 333-337 in relation to various evidences of this.

<sup>9</sup> P. Wheeler, *The Sacred Scriptures of the Japanese* (N. Y., 1952), p. 389.

<sup>10</sup> E. C. Krupp, *op. cit.*, p. 97.

All that aside, we note in passing that Alone-and-Empty also existed in primeval darkness.<sup>1</sup> So likewise did Inyan, the Lakota, or Sioux, Creator. As it is said of him, he lived with Han “who was only the black of darkness,”<sup>2</sup> further clarified as “the dark void.”<sup>3</sup>

The same situation is also found among the Australian Aborigines:

“In the very beginning everything was resting in perpetual darkness; night oppressed all the earth like an impenetrable thicket. The Gurra ancestor—his name was Karrera—was lying asleep in everlasting night...”<sup>4</sup>

Not only have we covered much more of this in our previous volumes,<sup>5</sup> we had also there noted that life does not really require sunlight for it to thrive.<sup>6</sup> Newer evidence has since then come to light—pun not intended. Video cameras lowered into the ocean depths off the coast of Antarctica have revealed the existence of bacteria and also clams “in a deep trough that never sees the light of day.” Most of this life was huddled around the base of “three-foot-tall mud volcanoes” where it “fed on chemicals—probably methane—bubbling up through sediments.”<sup>7</sup> And while, yes, the bacteria was small enough as bacteria usually are, the clams were brilliant white and up to a foot long.<sup>8</sup>

As, however, we have also pointed out, this darkness could not have been total. And this, too, was admitted by ancient man.<sup>9</sup> As the ancient Peruvians claimed: “Long ago the earth was dark and grey.”<sup>10</sup> But they also knew there was “a diffuse light.”<sup>11</sup> According to Cottie Burland, this was because of their belief that there had been no Sun to light the day.<sup>12</sup> But as we know from the Quiché Maya further north, it is the *present* Sun that was then missing from the sky.<sup>13</sup>

### THE SUB-STELLAR IDENTITY

To Max Müller, mistaken as he was on various matters, the focus of astral mythology was nothing more mysterious than the Sun.<sup>14</sup> In this he was mostly, but not entirely, misled by the works of the Reverend G. W. Cox.<sup>15</sup> Much like the earlier Ambrosius Theodosius Macrobius

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<sup>1</sup> *Ibid.*

<sup>2</sup> S. Eddy, *Native American Myths* (London, 2001), p. 9.

<sup>3</sup> *Ibid.*, p. 50.

<sup>4</sup> C. H. Long, *Alpha: The Myths of Creation* (N. Y., 1963), p. 162.

<sup>5</sup> *God Star*, pp. 274 ff; *Flare Star*, pp. 214-216.

<sup>6</sup> *God Star*, pp. 286 ff.

<sup>7</sup> E. Kleeman, “Geologists Find Life in a Dark Frigid Trough,” *Discover* (November 2005), p. 13.

<sup>8</sup> *Ibid.*

<sup>9</sup> See *God Star*, pp. 283-286.

<sup>10</sup> C. A. Burland, *Myths of Life & Death* (N. Y., 1974), p. 245.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*

<sup>13</sup> D. Tedlock, *Popul Vuh* (N. Y., 1985), p. 182.

<sup>14</sup> M. Müller, *Chips from a German Workshop* (N. Y., 1879), p. 139.

<sup>15</sup> *Ibid.*, pp. 159, 165.

(A.D. 395-423)<sup>1</sup>, Cox saw just about every major deity of antiquity as a personification of the Sun.<sup>2</sup> It is not that Macrobius himself was entirely in error since, by his time, it had already been forgotten that Earth's original sun was not the one shining above his head. It was, however, still known to the early civilizations even long after Earth's primordial sun was usurped by our present luminary. That the Sumerians still remembered their prime deity as having been a radiating body in the sky is evidenced by the cuneiform symbol they adopted to "spell" their word for "god." But that they knew this radiating god was not our present solar orb is indicated by the entirely different symbol they used for what they called the "Sun of day."<sup>3</sup> More than that, they never lost track of the fact that this radiating body was an earlier phase of the planet we now know as Saturn. For that reason, the planet Saturn was often referred to as the star of the Sun by various ancient nations.<sup>4</sup> This was a practice that was already being employed by the astronomers of Babylon. We knew this from Diodorus Siculus, the Sicilian historian who wrote sometime in the first century B.C.<sup>5</sup> We have also since then recovered some of the original reports of the Babylonian astrologers who referred to Saturn in those exact terms.<sup>6</sup> Not only that, Saturn was actually called by the very same name that was later foisted on *the* Sun.<sup>7</sup>

This was not, however, restricted to Mesopotamia. El, whom we've already met, the very deity at the head of various Canaanite pantheons, was equated with the Assyro-Babylonian Shamash<sup>8</sup>—and Shamash, as we have shown,<sup>9</sup> was a name which the Babylonians bestowed on the Sun as well as on the planet Saturn. At a later time, the Phoenicians (who were also Canaanites) continued to refer to the same El as Kronos,<sup>10</sup> the Greek name of the planet Saturn. But, in the meantime, El was also the name they applied to the Roman Sun-god, Sol,<sup>11</sup> since that name, too, had originally belonged to Saturn (see below).

One of the names the ancient Hindus bestowed on this radiating body, which mythologists have misunderstood as the Sun, was Martanda.<sup>12</sup> But that Martanda was not the *present* Sun is indicated by the belief that its radiance was eventually "cut away," following which it no longer shone "with excessive energy."<sup>13</sup> For that reason, Martanda went down in myth as "the

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<sup>1</sup> A. T. Macrobius, *Saturnalia*, Book I.

<sup>2</sup> G. W. Cox, *A Manual of Mythology* (London, 1867), *in toto* (not to be confused with the work of the same name by Alexander S. Murray).

<sup>3</sup> J. Bretschneider, "Life and Death in Nabada," *Scientific American* (March 2005, Special edition), p.59.

<sup>4</sup> As documented in *God Star*, pp. 121-122.

<sup>5</sup> Diocorus Siculus, *Bibliotheca Historica*, II:30:34.

<sup>6</sup> L. Depuydt, "How to Date a Pharaoh," *Archaeology Odyssey* (July/August 2005), p. 30; see also R. C. Thompson, *The Reports of the Magicians and Astrologers of Nineveh and Babylon*, Vol.II (London, 1900), p. lxiii; W. A. Heidel, *The Day of Yahweh* (N. Y., 1929), pp. 437, 470.

<sup>7</sup> See here, for instance, A. Jeremias, *Handbuch der Altorientalischen Geisteskultur* (Leipzig, 1913), p. 84.

<sup>8</sup> W. F. Albright, *Yahweh and the Gods of Canaan* (N. Y., 1968), p. 141.

<sup>9</sup> Check the Index to *God Star*; see also *Flare Star*, pp. 113, 132, 137.

<sup>10</sup> W. A. Heidel, *The Day of Yahweh* (N. Y., 1929), p. 470.

<sup>11</sup> T. W. Doane, *Bible Myths and their Parallels in Other Religions* (N. Y., 1882), p. 484.

<sup>12</sup> W. D. O'Flaherty, *Hindu Myths* (Harmondsworth, 1976), p. 348.

<sup>13</sup> *Ibid.*, p. 69.



In the Nabada script, which utilizes Sumerian cuneiform for its Semitic language, the sign for “star,” “planet,” and “god,” shown to the left, a rougher version of the one in the center, is entirely different from that employed for “day” and “Sun,” shown on the right.

hidden, lost or dark sun.”<sup>1</sup>

We have already shown in a previous volume that, in Greece, the name that was given to the Sun—i.e., Helios—had originally belonged to Kronos/Saturn.<sup>2</sup> The veracity of this disclosure is more than evident when we are told that Helios was seen “to come to the celestial pole,”<sup>3</sup> a locality that the present Sun is impossible to attain. On the other hand, as we have seen, mankind’s fossilized memory holds this very spot as the former station of the planet Saturn.

So, likewise, with the Romans who also knew that the name they reserved for the Sun—i.e., Sol—had earlier been that of the Saturnian orb. It is often stated that Gaius Iulius Hyginus referred to Saturn as the star of Sol, an interpretation that I myself have fallen victim to.<sup>4</sup> But the manner in which Hyginus phrased this statement makes it clear that Sol and Saturn were actually thought of as having been one and the same. As his words read: “The second star is that of Sol; others say of Saturn.”<sup>5</sup> Judging by the enumeration of the planets he himself employed, the second star could not have been the Sun.

It therefore does not take much expertise to realize that the north celestial polar source of heat and light that was required to keep Earth’s Arctic regions free of ice and teeming with near-tropical life would have been the proto-Saturnian sun we have described.

## RISING AND SETTING

Had the idea of a northern sun been foisted on other nations by Mesopotamian civilization, as some continue to maintain, the notion would probably have stopped right there. It is doubtful that these other nations would have purposely tailored their reports in order to bring them in line with what would have been a foreign disclosure of doubtful veracity. Think about it: Who would even have believed that the Sun had once risen in the north? Why would

<sup>1</sup> J. Herbert, “Hindu Mythology,” in “India: The eternal Cycle,” *Larousse World Mythology* (London, 1972), p. 233.

<sup>2</sup> *God Star*, p. 135 (but check also the Index to same work); see also M. A. van der Sluijs, “Gods and Planets,” Part 2, *Chronology & Catastrophism Workshop* (2003:2), p. 14.

<sup>3</sup> H. D. Betz, *The Greek Magical Papyri in Translation* (Chicago, 1986), p. 51.

<sup>4</sup> *God Star*, p. 122.

<sup>5</sup> Hyginus, *De Astronomia* (also known as *Poetica Astronomica*), II:42:6-10.



Helios



intelligent scribes have worded their reports in such a way to reflect this oddity had it not been really so? Take the Egyptians as an example. The manner in which they described the rising and setting of Ra has left translators of their texts dumbfounded. One particular word that has troubled them immensely is *aakhut*, which most of them have translated as “horizon,” since that is where the texts claim the Sun to have risen and set. But as others have correctly noted, the word in question is best translated as “light-land.”<sup>1</sup> This light-land was associated with the far north, an astronomical ambiguity that has given rise to many misconceptions.<sup>2</sup> What this actually means is that Ra was believed to have risen and set—to have “shone” and “dimmed,” really<sup>3</sup>—in that same “far north.” Although Henry Corbin viewed most of mythology from a mystical point of view, even he came to realize that the very concept of “east,” as understood at present, was for the ancients the “heavenly pole.”<sup>4</sup>

Edric Butterworth said it all when he surmised that the sun of ancient man had to have been a different body than the one that shines upon us. The mytho-historical sun, he wrote, “is not the natural sun of heaven, for it neither rises nor sets, but is, as it seems, ever in the zenith above the navel of the world.”<sup>5</sup> That by “zenith” he understood the “north celestial pole” is evidenced by what he claimed to be “an ambiguity between the pole star and the sun.”<sup>6</sup> We find the same association among the Blackfoot Amerinds who preached that the North Star is “the hole through which the radiance of the Sun God shines.”<sup>7</sup> As Ev Cochrane rightly noted: “Although this situation represents an obvious impossibility in the current solar system, it is perfectly descriptive of the polar configuration dominated by the northern polar sun.”<sup>8</sup>

In the end, it cannot be denied that every race and nation had to come from somewhere else. And it is this general movement of peoples across the globe that is really responsible for the spread of ancient knowledge. This is entirely different from the borrowing of ideas by one race or nation from another. Whatever transpired in the sky “in the beginning” was impressed on one and all. When people moved, they brought their heritage along with them. But each devised its own way of telling what had formerly transpired. And while what ever had come to pass was common to each and every one, the telling of the events retained their unique brand among each individual race.<sup>9</sup> Had they borrowed from each other, they would all have told their tales in the same way. It is not that borrowing did not take place, but wherever it did occur, it would have been minimal and quite evident when comparing relevant motifs.<sup>10</sup>

This holds just as true when it comes to the dissemination of cosmic knowledge. As we have already pointed out, astronomical information filtered out into the western world from a

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<sup>1</sup> M. Lichtheim, *Ancient Egyptian Literature—Volume I: The Old and Middle Kingdoms* (Berkeley, California, 1975), p. 115

<sup>2</sup> See here, for instance, J. Assmann, “Horizont,” *Lexikon der Ägyptologie*, 17:III:1 (1977), pp. 3-7.

<sup>3</sup> See *God Star*, p. 215 for further references.

<sup>4</sup> H. Corbin, *Spiritual Body and Celestial Earth* (Princeton, 1977), p. 71.

<sup>5</sup> E. A. S. Butterworth, *The Tree at the Navel of the World* (Berlin, 1970), p. 124.

<sup>6</sup> *Ibid.*

<sup>7</sup> D. Miller, *Stars of the First People* (Boulder, 1997), p. 246.

<sup>8</sup> E. Cochrane, “Falling Star,” *AEON* VI:6 (October 2005), p. 19.

<sup>9</sup> See also *God Star*, pp. 35-43.

<sup>10</sup> More in *ibid.*, pp. 29-34.

central Babylonian font. But this is not to say that *all* ancient astronomical knowledge had its origin in that same source. "It is certainly wrong to suppose that Greek astronomical theory of the fifth century rested on a sophisticated, elaborated and completed Babylonian base, which became known to Greeks of the period," writes Antonie Pannekoek, "and it is kind of begging the question to explain fifth century Greek astronomical and calendrical discoveries by postulating prior Babylonian knowledge."<sup>1</sup> Which is why he ended up by saying that Babylonian influence, in this matter, may be something of "a red herring."<sup>2</sup>

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<sup>1</sup> A. Pannekoek, *A History of Astronomy* (N.Y., 1961), p. 99.

<sup>2</sup> *Ibid.*

# Chapter 4

## Time Zero

### TRANSITIONAL DISKS

Despite the admission by various authorities that planets simply cannot accrete out of the debris contained in circumstellar disks,<sup>1</sup> the formation of planets from such disks continues to be preached by various others.<sup>2</sup> Once quite elusive, circumstellar disks were first imaged by the Hubble Space Telescope in 1992. Although such disks have been found around old stars, these have been claimed to contain nothing but the “leftovers” from previous planet-forming episodes.<sup>3</sup> Theoretically, young stars should be the ones surrounded by disks that are still capable of birthing planets. Present telescopes, however, are still too weak for direct imaging of young stars, let alone the fainter disks that might surround them.<sup>4</sup> And yet not only have such disks been successfully *inferred* through their spectral signatures, so have gaps within their circling debris.<sup>5</sup> Having been dubbed *transitional* disks, computer modeling has now determined that the gaps within them are carved by the planets in their midst.<sup>6</sup> The data that has gone into this modeling was however chosen in conformity with the very theory it was meant to validate,<sup>7</sup> which is as close to circular modeling as one can get. And, to be sure, as Adam Frank, the foremost proponent of the theory, himself admits, not everyone is ready to jump on his bandwagon.<sup>8</sup> Other scientists have their own take concerning these gaps.<sup>9</sup> But, according to Frank, the consensus among astronomers is that “newly formed planets are the real culprits punching holes in young stellar disks.”<sup>10</sup> But let’s be clear about all this. Even if planets will yet be found within the gaps in circumstellar disks, it would not necessarily mean that they were formed within the disk or that there is no other way in which they could have been formed. If entire galaxies can originate in more than one way, as Halton Arp maintains,<sup>11</sup> why not stars and planets?

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<sup>1</sup> Various authoritative sources as supplied in: *God Star*, pp. 469-471; *Flare Star*, pp. 255-256; *Primordial Star*, pp. 1-5.

<sup>2</sup> See for instance, T. P. Ray, “Fountains of Youth,” *Scientific American* (special 2004 edition—*The Secret Lives of Stars*), pp. 13, 15; A. Frank, “How to Make a Solar System,” *Astronomy* (February 2009), pp. 28 ff.

<sup>3</sup> *Ibid.*, p. 31.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, pp. 31-32.

<sup>6</sup> *Ibid.*, pp. 30 ff.

<sup>7</sup> D. Pendick, “Dust Rings Point to Small Planets,” *Astronomy* (February 2009), p. 25; A. Frank, *op. cit.*, p. 32.

<sup>8</sup> *Ibid.*, p. 33.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*

<sup>11</sup> H. Arp, *Seeing Red: Redshifts, Cosmology and Academic Science* (Montreal, 1998), pp. 87-90, 110-111, 118.

## STAR OF THE SEA

Circumstellar disks come in more than one type. The one around the star dubbed HD 15115, in the constellation Pictor, is lopsidedly elliptical, rather than circular, in shape. Nor is the star situated exactly in its center, resulting in a “needle-shaped” configuration where it appears to jut out from one side of the star as seen from Earth’s perspective.<sup>1</sup> Another disk, belonging to a young star north of Antares, rotates in two opposing tracks: its inner regions turn in one direction, its outer in the opposite way.<sup>2</sup> Yet one more disk is actually ring-shaped, with a vast gap between its inner edge and the star that gave it birth.<sup>3</sup> We shall not here go into the various theories that have been proposed to account for these oddities. We shall only note here that no planet has been detected within the gap formed by the ring-shaped one noted above. On the contrary, this particular ring-shaped disk exists around the remnant of a supernova.<sup>4</sup>

Circumstellar disks have also been detected around brown dwarf stars.<sup>5</sup> And since proto-Saturn was such a star, it, too, would have been hugged by a similar disk. Some of our Paleolithic ancestors likened this nebulous cloud to a chaotic whirling mass, a foamy haze, or fog.<sup>6</sup> Among other items, others compared it to a stretch of eddying waters, a whirling ocean in the sky.<sup>7</sup> It is for that very reason that the North, or Pole, Star, received the name *Stella Maris*—Star of the Sea. Although, as George Michanowsky noted, the North Star has been looked upon by mariners as a navigation beacon,<sup>8</sup> that is not the reason why it was so named. Michanowsky, however, was wrong in assuming that the original *Stella Maris* had not resided in the north. For erroneous reasons we need not here go into, he believed it had instead “shone in the far-southern sky.”<sup>9</sup> He could not, however, evade the association of *Stella Maris* with the Babylonian god named Ea,<sup>10</sup> whose alias as Kronos/Saturn even he had to accept.<sup>11</sup> Immersed as it would have been right in the center of its ocean-like whirlpool, Star of the Sea would have been a well earned designation of the proto-Saturnian sun. And because of its former north celestial polar station, this telling name was easily passed on to the North Star. Why this title, among others, was eventually attached to the mother of Jesus, we shall leave to a later volume of this series. In the meantime we also notice that the Indic *Surya*, conventionally said to be the Sun, was revered as the Child of the Waters.<sup>12</sup> But while there is no reason why the Sun should be so called, there are ample grounds why proto-Saturn should have been. And

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<sup>1</sup> L. Layton, “Needle-Shaped Disk Discovered,” *Astronomy* (November 2007), p. 21.

<sup>2</sup> C. Kitchin, “Exoplanet Two-Way System,” *Astronomy Now* (April 2006), p. 10; D. Shiga & R. Naeye, “Weird Disks,” *Sky & Telescope* (July 2006), pp. 16-17

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> R. Naeye, “Binary Sheds Light on Brown Dwarf Formation,” *Sky & Telescope* (October 2004), p. 22.

<sup>6</sup> See *God Star*, pp. 261-273; *Flare Star*, pp. 217-223; in both of which ample evidence is supplied.

<sup>7</sup> A. R. Johnson, *Sacral Kingship in Ancient Israel* (Wales University, 1955), p. 9.

<sup>8</sup> G. Michanowsky, *The Once and Future Star* (N. Y., 1977), p. 54.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*, p. 53.

<sup>11</sup> *Ibid.*, pp. 74-75

<sup>12</sup> M. Müller, *Chips from a German Workshop* (N. Y., 1870), p. 327.

that Surya had served as a name for Saturn before it was transferred to the Sun we have amply indicated in our previous works.<sup>1</sup> The same motif surfaces in the Book of *Genesis* where the “spirit” of Elohim, usually translated as “God,” is said to have “moved upon the face of the waters.”<sup>2</sup> That these waters were celestial need not be repeated, as neither need we re-assert Elohim’s identity as proto-Saturn. For the same reason, the Sumerian god Enlil was said to have been in “control of the watery element”<sup>3</sup> which, unfortunately, turned him in the eyes of some into a god of water.<sup>4</sup> But are we also going to identify Enlil as a proto-Saturnian god?

## DESIGNATIVE IDENTITIES

There will be some who will see Enlil as a personification of Mars rather than proto-Saturn because the Martian god Nergal was also known as “the Ellil of the Netherworld.”<sup>5</sup> This seems to follow because Ellil was the Akkadian version of Enlil. But all that means is that Nergal was considered the equivalent of the proto-Saturnian deity when Mars resided in the netherworld, which subject must also be reserved for a future volume of this series.

Enlil himself was referred to as Belos and/or Bel,<sup>6</sup> sometimes as the “older” Bel,<sup>7</sup> whose identity as Saturn we have elsewhere shown.<sup>8</sup> In addition to that, Enlil was also equated with Shamash,<sup>9</sup> which, again unfortunately, rendered him a Sun-god in the minds of some mythologists.<sup>10</sup> But that, very much like Surya, the name Shamash was originally bestowed on Saturn need not be re-stressed.

In one tradition, Enlil was considered an aspect of Anu.<sup>11</sup> In another, he was honored as a member of a trinity with Anu and Ea,<sup>12</sup> three gods-in-one, whose individual identities as proto-Saturn was discussed in earlier pages of this work as well as elsewhere.<sup>13</sup> Yet again, Enlil was also equated with Ninib,<sup>14</sup> an earlier reading for Ninurta, who was also Saturn.<sup>15</sup> And if one needs more, we find Enlil assimilated to Kumarbi,<sup>16</sup> the Hurrian god corresponding to the

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<sup>1</sup> *God Star*, pp. 122, 132, 216; *Flare Star*, p. 137.

<sup>2</sup> *Genesis* 1:2.

<sup>3</sup> M. Jastrow, Jr., *The Civilization of Babylonia and Assyria* (Philadelphia, 1915), p. 196.

<sup>4</sup> *Ibid.*

<sup>5</sup> S. Dalley, *Myths from Mesopotamia* (Oxford, 1991), p. 163.

<sup>6</sup> F. Guirand, “Assyro-Babylonian Mythology,” *New Larousse Encyclopedia of Mythology* (London, 1972), p. 55.

<sup>7</sup> D. A. Mackenzie, *Myths of Babylonia and Assyria* (London, 1915), re-issued as *Mythology of the Babylonian People* (London, 1996), p. 35.

<sup>8</sup> *Flare Star*, pp. 303, 347, 472, where various sources are cited.

<sup>9</sup> S. H. Langdon, *Semitic Mythology*, Vol. V of *The Mythology of all Races* (N. Y., 1964), pp. 61, 63.

<sup>10</sup> *Ibid.*

<sup>11</sup> S. H. Langdon, *op. cit.*, p. 93.

<sup>12</sup> D. A. Mackenzie, *op. cit.*, p. 36.

<sup>13</sup> *God Star*, pp. 128, 167-168, 213, 225, 229; *Flare Star*, pp. 64-65, 105, 125-126, 133-134, 220.

<sup>14</sup> M. Jastrow, Jr., *op. cit.*, p. 197.

<sup>15</sup> See back to page 42, this very work, but check also *God Star*, pp. 62, 124, 125 ff., 128 ff., 131, 212-213, 240, 449; *Flare Star*, pp. 105, 113, 133-134, 138, 302.

<sup>16</sup> H. G. Güterbock, “The Hittite Version of the Hurrian Kumarbi Myths: Oriental Forerunners of Hesiod,” *Supplement to American Journal of Archaeology*, Vol. LII (1948), p. 132.



old Semitic El,<sup>1</sup> as well as the Greek Kronos,<sup>2</sup> both of whom have been amply identified as personifications of proto-Saturn. But since identities of names are not enough, let us pass next to the god's characteristics.

### LORD OF THE VIOLENT WIND

Even so, what's in a name? A lot, in fact, when it comes to these particular times since it is not known that our ancient forebears ever used abstractions in their designation of realities. So what, then, does the name Enlil mean?

Stephen Langdon translated the name Enlil as "Lord of the Wind,"<sup>3</sup> and although this meaning has been disputed by some,<sup>4</sup> it continues to be upheld by the best of others. Kinnier Wilson saw the name as "Lord Wind," which he then sought to replace with "Lord Gas,"<sup>5</sup> but only because he saw most, if not all, Mesopotamian deities as personifications of burning fumes rising from the oil fields of that particular region.<sup>6</sup> Not too many have been convinced of that particular argument. Some have read Enlil's name as "Lord Storm,"<sup>7</sup> which then suggested that the god stood for "the storm itself,"<sup>8</sup> while others have identified him simply as air.<sup>9</sup> Judging by what Enlil really stood for, Mircea Eliade came closest to the truth in giving a fuller version of the god's title as "lord of the *violent* wind."<sup>10</sup> But as those not in the know might ask, what has wind, violent or not, to do with proto-Saturn?

This brings us back to Elohim whose "spirit" is said to have moved upon the face of the celestial waters we discussed above. As we had noted in previous works, the Hebrew word translated as "spirit," that is *ruach*, actually means "wind."<sup>11</sup> And wind is to be found in association with the proto-Saturnian deity of more than one ancient nation,<sup>12</sup> among whom we encounter Ninurta whose favored weapon was not only identified as a cyclone,<sup>13</sup> but as the *sha-rur*,<sup>14</sup> the "mighty cyclone of Enlil" himself.<sup>15</sup> At the other end of the mythological spectrum we come across the Polynesian Tane, also known as Kane,<sup>16</sup> whose characteristics are

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<sup>1</sup> *Ibid.*, p. 133.

<sup>2</sup> *Ibid.*, pp. 123, 130, 132-133.

<sup>3</sup> S. H. Langdon, *op. cit.*, pp. 61, 92, 99.

<sup>4</sup> S. Dalley, *op. cit.*, p. 321.

<sup>5</sup> J. V. K. Wilson (with H. Vanstiphout), *The Rebel Lands* (Cambridge, 1979), p. 57.

<sup>6</sup> *Ibid.*, *in toto*.

<sup>7</sup> J. K. Hord, "The Twilight of the Goddess: An Ancient Religious Revolution," *Comparative Civilizations Review*, No. 16 (1987), p. 62.

<sup>8</sup> *Ibid.*

<sup>9</sup> C. Hyers, "Genesis Knows Nothing of scientific Creationism: Interpreting and Misinterpreting the Biblical texts," *Creation/Evolution* 4:2 (Spring 1983), p. 16.

<sup>10</sup> M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 89 (emphasis added).

<sup>11</sup> *God Star*, pp. 262, 429, 434, 441, 446, 451; *Flare Star*, pp. 289, 370.

<sup>12</sup> See here *God Star*, pp. 429-439.

<sup>13</sup> S. H. Langdon, *op. cit.*, pp. 117-118, 128.

<sup>14</sup> *Ibid.*, pp. 126, 128.

<sup>15</sup> *Ibid.*, p. 125.

<sup>16</sup> M. Beckwith, *Hawaiian Mythology* (Honolulu, 1970), p. 44.

uniquely Saturnian.<sup>1</sup> While he was referred to as a turning, that is spinning, entity associated with “the great water source” of our discussion, he was also known as “Tane of the whirlwind.”<sup>2</sup>

Like all other Saturnian deities, however, Enlil was not just a windy god, but the personification of a particular gale, the one that blew in the north celestial sphere.<sup>3</sup> This was the North Wind we have already met as the property of Osiris and Atum.<sup>4</sup> It was the same cyclone embodied by Hurakan,<sup>5</sup> from whom the word “hurricane” is derived. This Mesoamerican deity was also said to have stood on one leg, as so did other proto-Saturnian gods in various traditions.<sup>6</sup>

Among other items of note, it was this single leg that led us to the realization that proto-Saturn had boasted a linear appendage which went down in the mytho-historical record as the *axis mundi* or polar column. Emanating from the proto-Saturnian orb, this appendage took the form of a whirling ray of light,<sup>7</sup> a churning pillar,<sup>8</sup> a fiery axis, that stretched all the way down to Earth’s north polar region.<sup>9</sup> Thus, very much like the Egyptian Shu, Enlil’s towering whirlwind was seen as an axial post that separated heaven from Earth,<sup>10</sup> or, by others, as having joined the two together. As David Talbott shrewdly deduced, this ethereal stream and the polar column were in reality one and the same.<sup>11</sup>

Readers and interpreters of the Old Testament should be excused for not realizing that the *ruach* of Elohim would have been columnar in appearance since there is nothing in the text that even hints at such an apparition. And yet, whoever was responsible for the detailed mosaics that adorn the medieval Cathedral of Santa Maria Nuova in Monreale, Sicily, depicted this very “Spirit of God” as just such a column. A dove is also shown in the middle of this wraith-like pillar and, in fact, it is this dove that is said to represent the “Spirit of God,”<sup>12</sup> otherwise known as the Holy Spirit or the Holy Ghost. One wonders what it was that made the artist imbed this dove in the middle of a columnar entity when there is nothing in the description of the event it illustrates which could have guided him. It is almost as if his inspiration had welled up from some long-buried collective memory.

If it really exists, the resurrection of this deep-set memory seems to persist in influencing modern society where it chiefly exhibits itself among artists and writers who should otherwise

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<sup>1</sup> See *Flare Star*, p. 312.

<sup>2</sup> E. Best, “Some Aspects of Maori Myth and Religion,” *New Zealand Dominion Museum Monograph* (1992:1), p. 16.

<sup>3</sup> D. Talbott, “On Testing the Polar Configuration,” *AEON* I:2 (February 1988), p. 113.

<sup>4</sup> See back to page 47, this very work.

<sup>5</sup> *God Star*, pp. 438-439.

<sup>6</sup> *Ibid.*, pp. 439-441.

<sup>7</sup> *Ibid.*, p. 457.

<sup>8</sup> *Ibid.*, pp. 429-437.

<sup>9</sup> *Flare Star*, pp. 227 ff.; *God Star*, pp. 429 ff.

<sup>10</sup> *Ibid.*, pp. 439-441,

<sup>11</sup> D. Talbott, *loc. cit.*

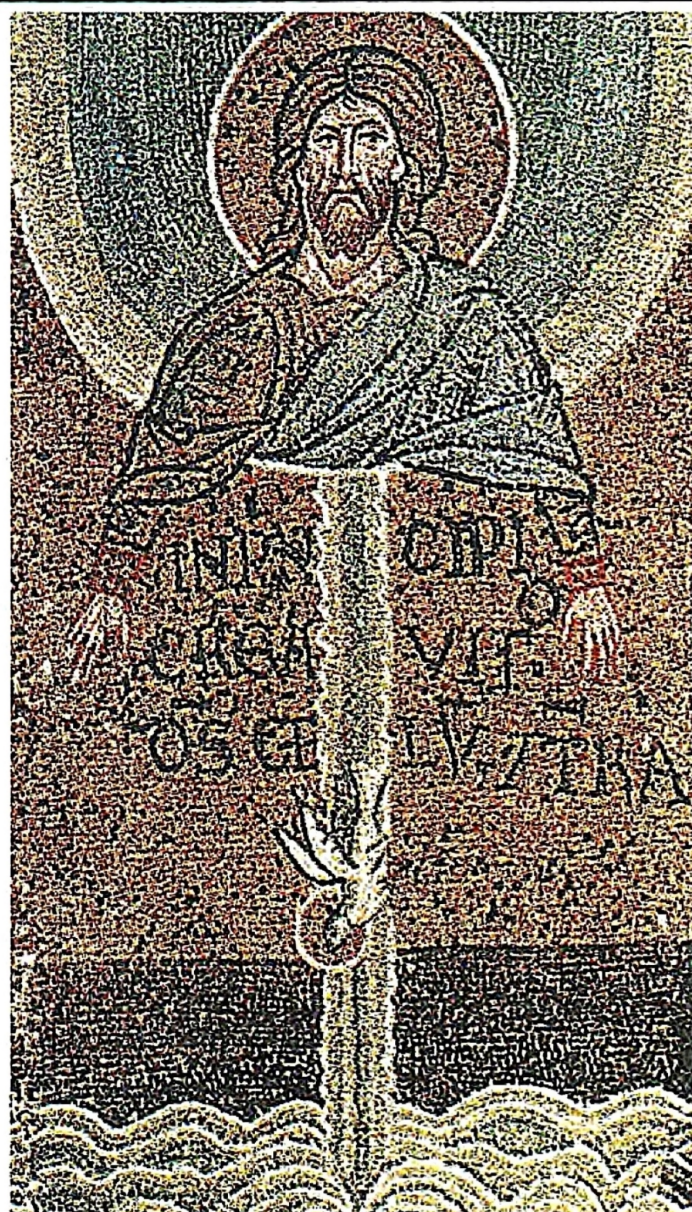
<sup>12</sup> M. D. Meinhardt, “Seven Luminous Days,” *Bible Review* (August 2002), p. 18.



have no knowledge of what it is they are portraying or describing.

While on this subject, I should also point to the work of the Mexican artist, Rolando Arjona Amábilis, one of whose semi-abstract paintings depicts what can best be described as the *axis mundi*—Mayan style. In this particular depiction, which is not even one of his best, the sun is portrayed as sending down a vertical beam of light illuminating a Mayan temple set upon a steep stepped pyramid.

The association of the pillar with Saturn has been recognized by investigators of ancient religious practices for quite some time, even in those cases where the connection is not directly evident. Charles Staniland Wake brought it to his readers' attention in the late 1870s when he discussed Kiyun, the Hebrew idol cited by the prophet Amos we mentioned earlier. Apart from the well-known fact that the deity in question symbolized the planet Saturn,<sup>1</sup> Wake tells us this idol "was represented in the form of a pillar," which he recognized as "the primeval symbol of deity."<sup>2</sup> Not only does he refer to this deity as the God of the Pillar,<sup>3</sup> he was cognizant of the fact that this was Saturn "who, under different names, appears to have been at the head of the pantheons of most of the peoples of antiquity."<sup>4</sup>



The *ruach* of Elohim.  
Mosaic at the Cathedral of  
Santa Maria Nuova, Monreale, Sicily.  
(Photograph courtesy of  
Casa Editrice Mistretta.)

<sup>1</sup> See *God Star* pp. 205-208, 232 & *Flare Star*, pp. 142, 345, for various sources on this equation.

<sup>2</sup> C. S. Wake, "Influence of the Phallic Idea in the Religions of Antiquity," in H. M. Westropp & C. S. Wake, *Ancient Symbol Worship* (N. Y., 1875), p. 60.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, pp. 53-54.





*Axis Mundi*—Mayan style: Painting by Rolando Arjona Amábilis.  
(Photograph by the author, courtesy of the Museo de la Ciudad, Merida, Mexico.)

## INTENSE AURORAL EVENTS

In his own related study of the above subject,<sup>1</sup> Anthony Peratt had reason to refer to a paper in which Thomas Gold asked “whether solar outbursts of the present day are representative of all that has happened in geologic times or whether much greater outbursts have occurred from time to time.”<sup>2</sup> Such intense outbursts, Gold was right in assuming, would cause strong “magnetic storm effects” in Earth’s atmosphere.<sup>3</sup>

Peratt, in turn, defined such “intense solar discharges” as magnetized plasma which would have stricken Earth’s polar regions.<sup>4</sup> This magnetized plasma, Peratt goes on, would be responsible for a series of instabilities, otherwise known as z-pinches, in intense Birkeland currents flowing from the Sun to Earth.<sup>5</sup>

Technicalities aside, what all this amounts to, still according to Peratt, is that the ethereal pillar ancient man witnessed in the sky during the period with which we are concerned was due to an intense z-pinch aurora—the very title of his paper—a colossal one to be sure, but an aurora nonetheless.<sup>6</sup> As Marinus (Rens) van der Sluijs, in following Peratt, noted: “Plasma instabilities seen from Earth in the night sky are auroras by definition.”<sup>7</sup>

What should not be lost sight of, however, is that Gold’s entire speculations in the paper quoted by Peratt amount to nothing more than a thought experiment. Beyond that, the only item he could point to in defense of his surmise was the large quantity of vitrified sand which is found “in a few places” on Earth, “notably in the Libyan desert.”<sup>8</sup> Vitrification of sand and even rocks can be achieved through meteoric impact, volcanic eruptions, and even puny lightning discharges. To blame such fused glass found “in a few places” on intense solar outbursts can hardly be said to justify Gold’s rationale. In fact, despite his theorizing, Gold himself went on record in cautioning that, although the possibility should not be ignored, one “cannot at the present time make a case for occasional giant outbursts on the sun”<sup>9</sup>—at least not on the scale he theorized.

Although Peratt did not know it at the time, the interpretation of the mythological pillar as an enhanced auroral apparition had already been proposed in 1990 by Milton Zysman. Very much like Peratt, Zysman held that Earth’s auroras would have been more energetic during the Bronze Age, which claim he rested on the contention of Earth’s diminishing magnetic

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<sup>1</sup> A. L. Peratt, *et al.*, “Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity Part II: Directionality and Source,” *IEEE Transactions on Plasma Science*, Vol. 35, No. 4 (August 2007), *in toto*.

<sup>2</sup> T. Gold, “Large Solar Outburst in the Past,” *Pontificiae Academiae Scientiarum Varia*, Vol. 25 (1962), as quoted by A. L. Peratt, *et al.*, *op. cit.*, pp. 778.

<sup>3</sup> *Ibid.*

<sup>4</sup> A. L. Peratt, *op. cit.*, p. 779.

<sup>5</sup> *Ibid.*

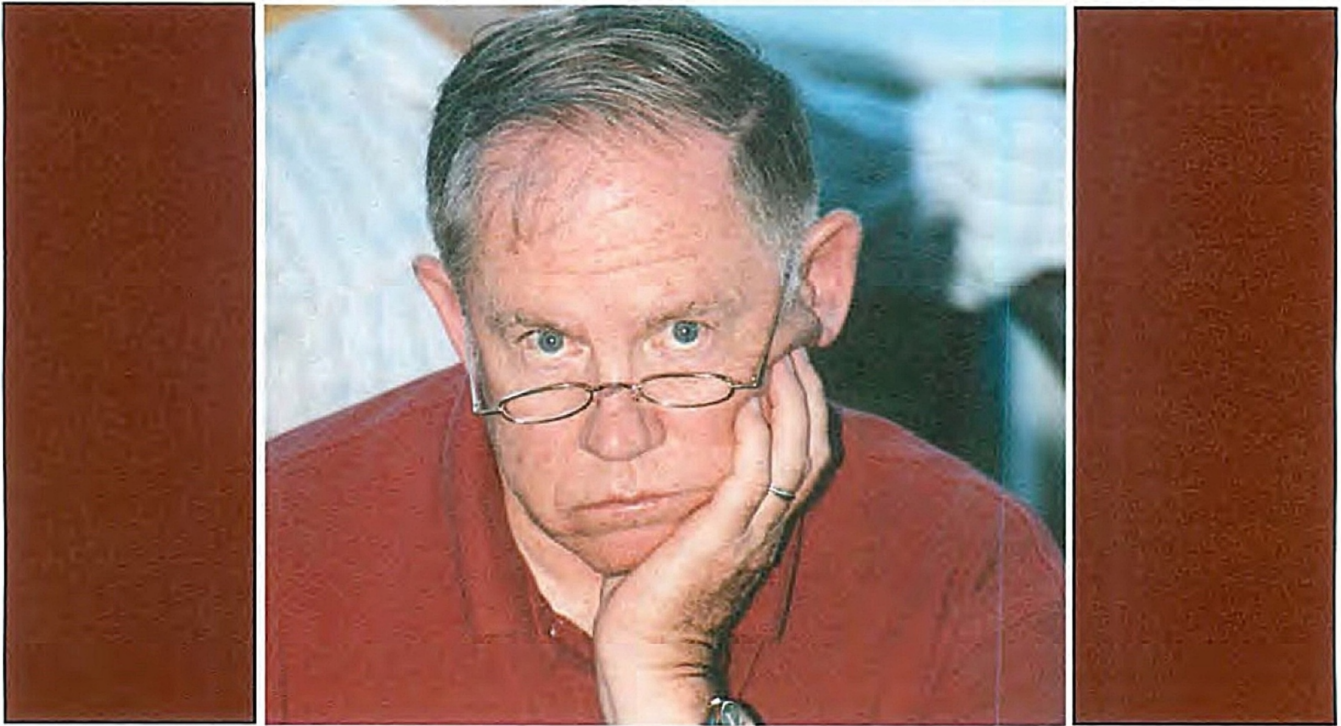
<sup>6</sup> See also, for instance, A. L. Peratt & W. F. Yao, “Evidence for an Intense Solar Outburst in Prehistory,” *Physica Scripta*, T131 (October 2008), *in toto*.

<sup>7</sup> R. van der Sluijs, “Ancient Traditions: What Can they tell Us About the History of the Earth?” *Chronology & Catastrophism Review* (2008), p. 64.

<sup>8</sup> T. Gold, *loc. cit.*

<sup>9</sup> *Ibid.*





Anthony L. Peratt  
(Photograph—2005—by the author.)

field.<sup>1</sup> As far as the pillar itself is concerned, however, Zysman could best envision surplus gases escaping from the polar regions extending upward in columnar majesty, entwined by altered Earth-bound particles emanating from the Sun.<sup>2</sup> In effect, while he never clarified what these escaping gases could have been, Zysman's interpretation of the world pillar, very much like Peratt's, turns out merely to have been a column of auroral light which, again like Peratt, is precisely what he calls it.<sup>3</sup> According to him, this pillar would have extended so high—anything up to 8,000 kilometers<sup>4</sup>—that it would have appeared to reach the zenith of the sky.<sup>5</sup>

As most everyone knows, present-day auroras appear to Earth-bound eyes as glorious scintillating curtains of light that dance around the sky at night. But if an aurora is increased by an order of magnitude or two, van der Sluijs tells us, it would take the form of a z-pinch in glow mode. If that transpires, he goes on, the auroral curtain would then turn into a stupendous pillar of radiant light.<sup>6</sup> "Because of the intense plasma flow and strong longitudinal magnetic field," Peratt himself explains, "the plasma forms a thin but dense sheath or plasma col-

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<sup>1</sup> M. Zysman, "Saturn Myth—A Challenge to the Planetary Hypothesis," *KATAKLYSMOS* (May 19, 1987), p. 9.

<sup>2</sup> *Idem*, "Let There Be Lights," in M. Zysman & C. Whelton, *Catastrophism 2000* (Toronto, 1990), p. 178; see also J. Abery's report on the 1990 Autumn Meeting of the Society for Interdisciplinary Studies in "Society News," *Chronology & Catastrophism Workshop* (1991:1), p. 1.

<sup>3</sup> M. Zysman, *op. cit.*, p. 179.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, p. 182.

<sup>6</sup> R. van der Sluijs, *loc. cit.*

umn in its propagation toward Earth.”<sup>1</sup> According to van der Sluijs, the “high-energy auroral storm” that Peratt holds responsible for this pillar would have lasted for decades.<sup>2</sup> Much like us, Peratt himself actually calls for “at least a few centuries if not millennia”<sup>3</sup>

Because of the so-called auroral nature of the apparition under discussion, van der Sluijs even called it a “sun pillar.”<sup>4</sup> This can be somewhat deceiving since what are usually termed Sun pillars, which grace our skies up to the present, are not auroral by any means. These pillars usually form when the light of the low Sun reflects itself off the ice crystals contained in sparse high-level clouds.<sup>5</sup> Besides which, they tend to set with the setting Sun itself. Needless to say, this is not what van der Sluijs had in mind.

Van der Sluijs also presents some hints from Hindu tradition which speak of “earth, air, and sky” as being “attached to the sun by means of a string.”<sup>6</sup> This is just as misleading since what is here being used is a paraphrasing in which the radiating body of the original text is misrepresented as *the* Sun. But let that also pass. What this made him wonder is whether the concept of such a string, or rope, could have been rooted in the ancients’ knowledge of the solar wind. If so, he goes on, the solar wind “must at some point have revealed itself in an unmistakable, visible form.” He then asks: “Is it conceivable that—at some time during the early Holocene—extreme solar weather produced such excitation that the plasma in the solar wind entered a visible glow mode...?”<sup>7</sup>

We will answer the above question in a while, but, in the meantime, I have a better one to ask: Is it even possible for a *solar* aurora to achieve a columnar form?

Van der Sluijs will be the first one to remind us that auroral apparitions *have* been said to mimic linear structures.<sup>8</sup> As documented by William Corliss, some reports *do* describe the appearance of “auroral pillars” as greenish-white “shafts of light” extending upwards from the horizon, which can “remain visible from a few minutes to over an hour.”<sup>9</sup> But, as van der Sluijs, following Corliss, himself noted, these columnar structures only *resembled* the aurora.<sup>10</sup> These apparitions were in fact described as having been of a steady and unchanging brightness,<sup>11</sup> which is hardly descriptive of auroras the lights of which are anything but

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<sup>1</sup> A. L. Peratt & W. F. Yao, *loc. cit.*

<sup>2</sup> R. van der Sluijs, *loc. cit.*

<sup>3</sup> A. L. Peratt, “Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity,” *IEEE Transactions on Plasma Science*, Vol. 31, No. 6 (December 2003), pp. 1211-1212 (not to be confused with Part II of the paper cited above).

<sup>4</sup> R. van der Sluijs, “A String Theory for the Sun,” *Chronology & Catastrophism Workshop* (2008:2), p. 28.

<sup>5</sup> See, for instance, F. Reddy, “Icy Optics,” *Astronomy* (December 2008), p. 63.

<sup>6</sup> R. van der Sluijs, *loc. cit.*

<sup>7</sup> *Ibid.*

<sup>8</sup> M. A. van der Sluijs, “The World Axis as an Atmospheric Phenomenon,” *Cosmos: The Journal of the Traditional Cosmology Society*, 21 (2005), p. 28.

<sup>9</sup> W. R. Corliss, *Lightning, Auroras, Nocturnal Lights, and Related Luminous Phenomena: A Catalog of Geophysical Anomalies* (Glen Arm, Maryland, 1982), pp. 7-8, as cited by van der Sluijs (see above).

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*





**Marinus Anthony van der Sluijs**  
(Photograph—2005—by the author.)

unchanging and/or steady. In fact, as also noted by van der Sluijs, but in a footnote,<sup>1</sup> Corliss tells us that these so-called auroral pillars have “a bearing well away from magnetic north,” usually appearing “in the eastern or western horizon, well away from the zone where auroral activity normally occurs,” and may therefore “have a different origin than the ever-changing beams and flickerings associated with the usual auroral display.”<sup>2</sup> Thus, when van der Sluijs next refers to similar atmospheric columnar apparitions recorded in medieval and Asian sources,<sup>3</sup> one can best class them with the ones recorded by Corliss. Atmospheric pillars that come and go are obviously not unknown, especially those related with the setting Sun, but in no way are they associated with auroras.

Let us now return to van der Sluij’s previous question: *Is it* conceivable

that—at some time during the early Holocene—extreme solar weather could have turned the plasma in the solar wind into a visible glow mode that would have imitated a towering pillar of light? As has now been discovered, what have been called “giant magnetic ropes” connect Earth’s magnetosphere to the Sun<sup>4</sup>—which might seem to lend some weight to the Hindu solar strings we have already seen van der Sluijs appeal to as evidence of a visible solar wind. It is these filamentary streams that are known to plasma scientists as the afore-mentioned Birkeland currents. And, as correctly adduced by van der Sluijs, it is the “existence of these twisted filamentary bundles of magnetic fields” that transport ions from the Sun along their length, which then provide the energy needed for geomagnetic storms and the auroral flare-ups that they cause.<sup>5</sup> But if it is these particular currents that are relied on for the formation of an auroral pillar, there are certain fundamentals that should not be lost track of.

First of all, such currents radiate outwardly from the Sun in all directions and, as trite as it may sound, only impinge upon Earth’s poles because our world’s magnetosphere is in their way. It is not as if there was only one such current that flows directly from the Sun to Earth. Even if the relatively few currents stretching from the Sun to the polar skies of our world were

<sup>1</sup> M. A. van der Sluijs, *op. cit.*, p. 42.

<sup>2</sup> W. R. Corliss, *op. cit.*, pp. 7-8.

<sup>3</sup> M. A. van der Sluijs, *op. cit.*, p. 28.

<sup>4</sup> *Idem*, “A String Theory for the Sun,” *Chronology & Catastrophism Workshop* (2008:2), p. 27.

<sup>5</sup> *Ibid.*





**The flickering curtains of the aurora borealis as seen from Earth.  
(Photograph courtesy of NASA.)**

somehow isolated and turned into glow-mode visibility, they would appear as lengthy arcs spanning the sky and not the vertical heaven-supporting pillar dictated by the mytho-historical record. How much of one arc or the other would be seen depends on the latitude of the observer, with those living in equatorial regions seeing both as of nearly equal length. Worse than that, while the terrestrial ends of these arcs would remain apparently attached to the same points on the horizon, their solar termini would quite naturally follow the Sun. These arcs would thus be seen to rise and set, disappearing completely beyond the horizon with each setting time. This is not at all what mytho-history has dictated down the ages. Nor will it do to favor science over myth when it was mythology that supplied us with the discussed model in the first place.

In a way, the above would not be much different from Lynn Rose's earlier model in which he compared the mythic pillar to the flux tube that stretches between Jupiter's poles and those of its moon, Io.<sup>1</sup> As we had explained in our first volume,<sup>2</sup> this flux tube is a stream of electrons constituting a 5 million amp, 400,000 volt current, which translates into 2 trillion watts

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<sup>1</sup> L. E. Rose, "Variations on a Theme of Philolaos," *KRONOS* V:1 (Fall 1979), pp. 37-38.

<sup>2</sup> *God Star*, p. 458.





Sun pillar—the likes of which are formed when light from the low Sun reflects off ice crystals in the air.  
(Photograph courtesy of NASA.)

of energy.<sup>1</sup> But while instrumentally detectable, and even photographable through exotic light, the tube is not optically visible. Had it ever been, it would still have appeared from Io's surface very much like the above-described heaven-spanning arcs that would have swept across the sky to disappear with every Jovian setting.

Let us, however, leave no stones unturned. Radiating fields aside, would an intense solar outburst as envisioned by Peratt really turn either one of Earth's auroras into a sustained vertical pillar of light that would have lasted for long ages? If we are to accept what spacecraft have been able to detect during present solar substorms, the best that can be said is that auroras suddenly flare-up, which temporary surges tend to enhance their brightness and extend their range of visibility.<sup>2</sup> And do not, for one moment, be led astray by the ill-chosen designation of such outbursts as *substorms*, each of which can unleash as much as a *hundred-thousand-billion* joules of energy,<sup>3</sup> "*the effects of which are unmistakable.*"<sup>4</sup> Such a solar outburst, as announced by NASA, took place in 2007. All it did to Earth's auroras was to turn them bluish which, while rare, are not unusual.<sup>5</sup> NASA's own interest in these explosive outbursts in Earth's magnetic field is necessitated by their ability to disrupt communications

<sup>1</sup> T. Gold, "Electrical Origin of the Outbursts on Io," *S.I.S. Review* IV:4 (Spring 1980), p. 111, where other sources are cited.

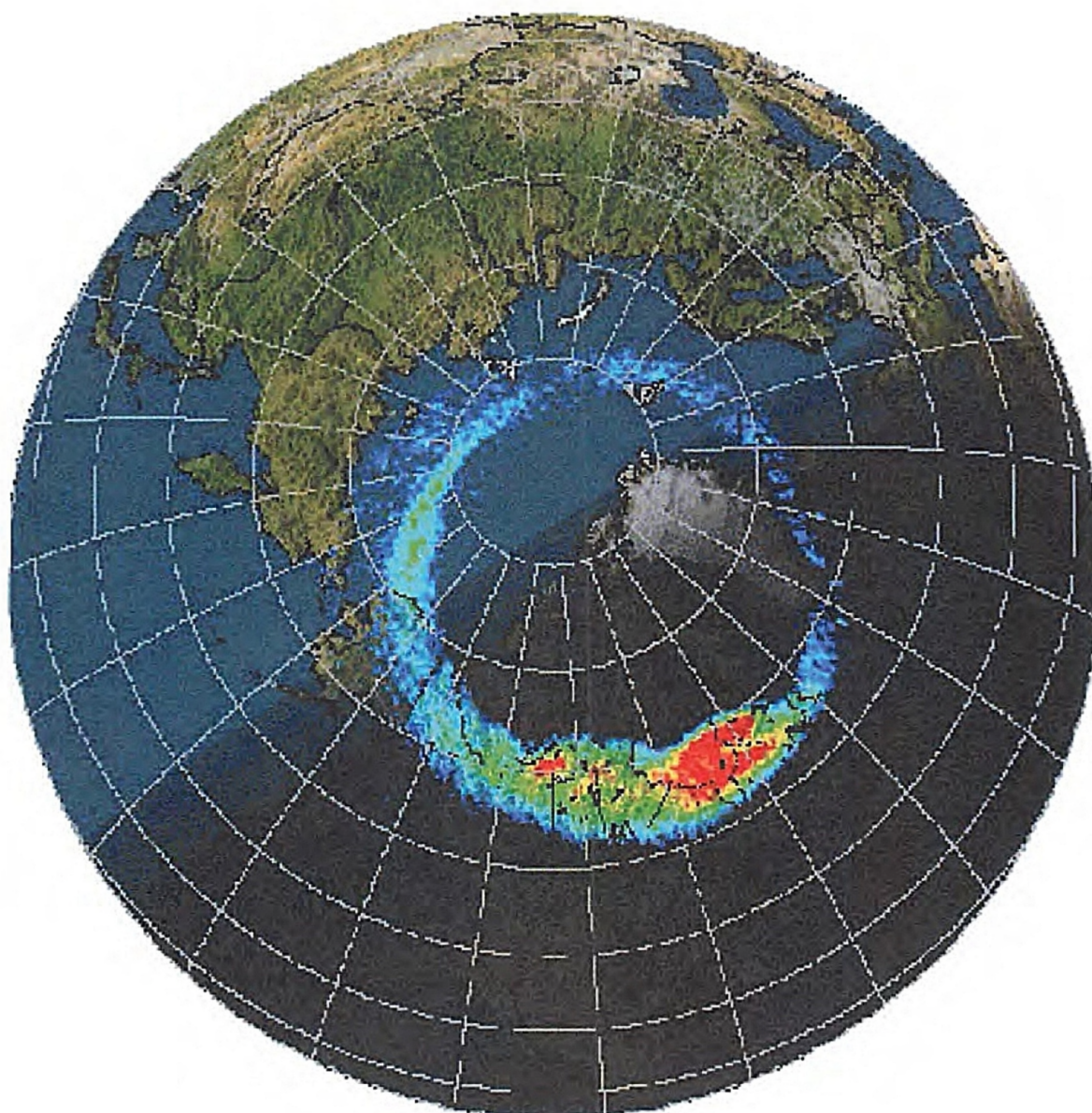
<sup>2</sup> D. Pendick, "Auroral Storm Trigger Confirmed," *Astronomy* (November 2008), p. 18.

<sup>3</sup> T. Phillips, "Auroras in Broad Daylight," *science.nasa.gov/headlines* (March 6, 2008), p. 2 (emphasis added).

<sup>4</sup> S. Battersby, "The Greatest Show on Earth," *New Scientist* (February 7, 2009), p. 36 (emphasis added).

<sup>5</sup> L. Dixon, Chairman's Welcome address at the SIS Cambridge Conference on August 31, 2007, *Chronology & Catastrophism Review* (2008), p. 2.





**The northern auroral oval as seen from space.**  
(Illustration courtesy of NASA.)

while overloading electrical transmission equipment. Some of these storms have stunned scientists with the vast amount of energy they have been seen to release.<sup>1</sup> “This kind of influx,” one of them reported, “is an order of magnitude greater than what we thought was possible.”<sup>2</sup> But let’s not fool ourselves. The substorm of 2007 was a baby compared to the full magnetic outburst that took place in 1859, which Peratt himself alludes to,<sup>3</sup> and which is not

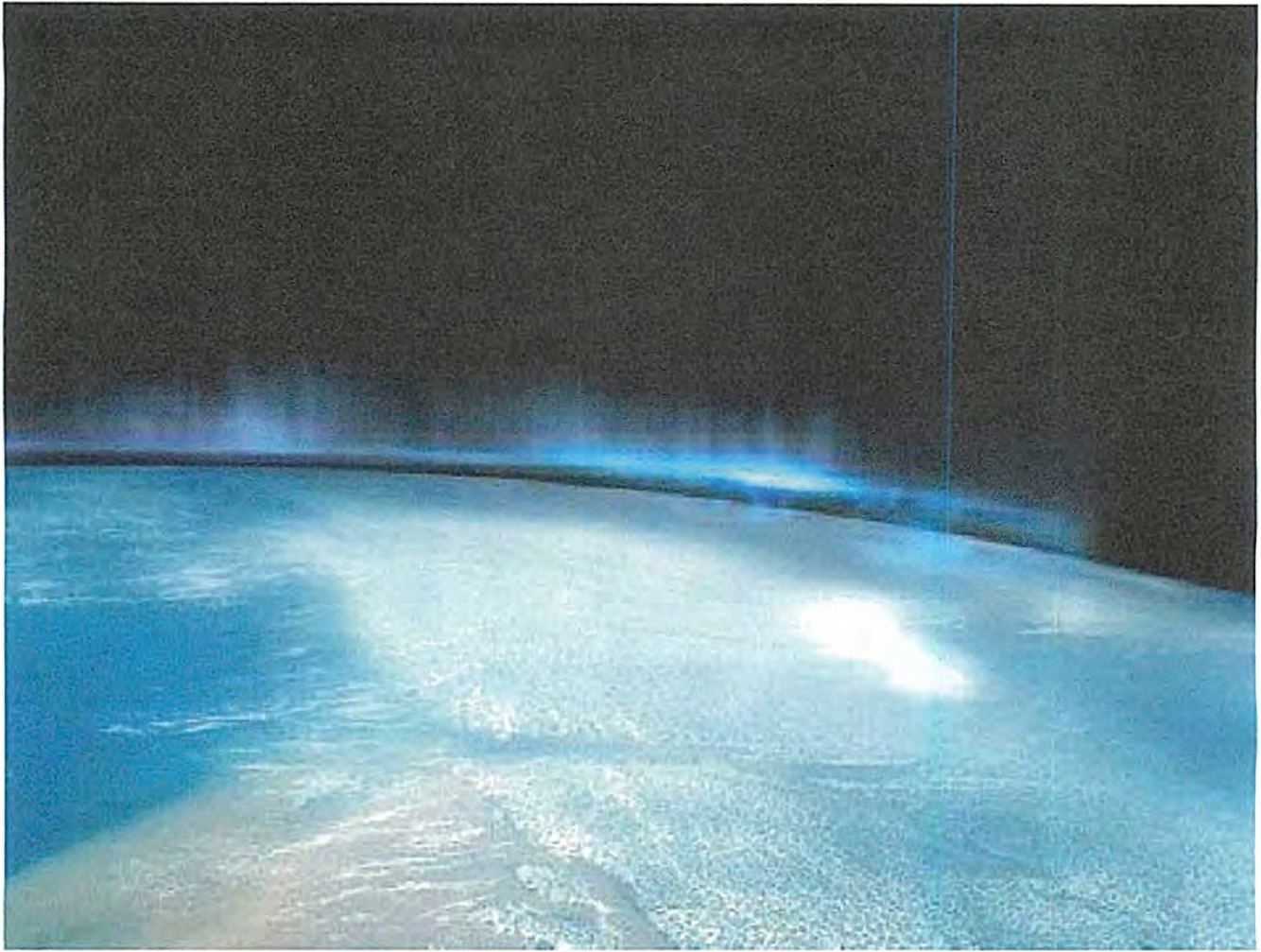
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<sup>1</sup> S. Smith, “Magnetic Breaches,” Picture of the Day, *thunderbolts.info* (January 5, 2009), p. 1.

<sup>2</sup> *Ibid.*, p. 2.

<sup>3</sup> A. L. Peratt & W. F. Yao, *loc. cit.*





**An oblique view of the aurora from space.  
(Photograph courtesy of NASA.)**

only known to have shorted the world's telegraph systems,<sup>1</sup> but also to have ignited widespread fires on more than one continent.<sup>2</sup> "It was perhaps the worst in the past 200 years," Robert Britt concluded, "and with the advent of modern power grids and satellites, much more is [presently] at risk."<sup>3</sup> But while the enhanced northern aurora of 1859 was responsible for some of the most dramatic sky apparitions that extended all the way close to the equator, turning night into day as far south as Panama,<sup>4</sup> there still was no pillar seen towering above Earth's polar horizon.

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<sup>1</sup> S. F. Odenwald & J. L. Green, "Bracing for a Solar Superstorm," *Scientific American* (August 2008), p. 80.

<sup>2</sup> R. R. Britt, "Perfect Space Storm Could be Catastrophic on Earth, Study Concludes," *Space.com* (January 7, 2009), p. 1.

<sup>3</sup> *Ibid.*

<sup>4</sup> S. F. Odenwald & J. L. Green, *loc. cit.*

Even then the claim could still be made that the particular solar outburst that was responsible for Earth's prehistoric pillar of light could have been even more energetic—and this would make sense since, obviously, nothing of the sort is transpiring at present.

But is it possible for a solar storm of the proposed magnitude to have lasted for the thousands of years required by the mytho-historical record or, for that matter, even van der Sluij's mere decades? Had such solar storms lasted for the long ages required by the mythic descriptions that both Peratt and van der Sluijs now accept as historically true, Earth would have lost the magnetic field on its day-side, while the incoming rush of electrons on the solar wind would have long stripped our puny world of its thin atmospheric envelope.<sup>1</sup> I will not go into all that would have transpired under such drastic occurrences except to say that none of us would be here to debate whether life itself survived.

We could stop there, but let us go one step further. Shoving all the above aside, can an extended auroral oval ever take the form of a singular pillar of light? As I had pointed out in Zysman's case, the auroral lights form a ring as seen from outer space because the solar particles bombarding Earth impinge on the magnetosphere and follow its lines of force which leave the actual poles electro-magnetically neutral.<sup>2</sup>

I then made the mistake of adding that the "column of auroral light that Zysman requires in order to save his model could only have been achieved, if at all, by having the auroral ring itself extend downward as a hollow tubular structure."<sup>3</sup> But I was wrong since, even then, this hollow tubular structure would not have appeared as a singular pillar of light supporting heaven.

The above is amply illustrated by Peratt in his presentation of the double-funnel shape taken by the incoming and outgoing Birkeland currents over Earth's polar regions which account for the auroral ovals as seen from space.<sup>4</sup> The upward-rising flow of electrons which make up these Birkeland currents were first detected in 1999.<sup>5</sup> As they intersperse themselves with the down-flowing stream, these solar currents create their own *separate* auroras. But before anyone envisions such an upward-flowing stream or the aurora it creates as having somehow been responsible for the sustaining pillar of myth, let us keep the facts in mind. Not only are these streams themselves invisible to human eyes, so is the aurora they create at each of Earth's poles.<sup>6</sup> Not only that but, had such an aurora once been visible, it would not have been much different from the one that is presently seen.

One can stretch the auroral oval down or up into space all one wants. The fact remains that its vast diameter of over 3,100 miles—c. 5,000 kilometers—to say nothing of the instability incurred by its scintillating display, excludes the possibility of its extension being viewed

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<sup>1</sup> See here, S. Battersby, *op. cit.*, p. 37.

<sup>2</sup> D. Cardona, "The Reflective Canopy Model and the Mytho-Historical Record," *AEON* IV:4 (April 1996), p. 34.

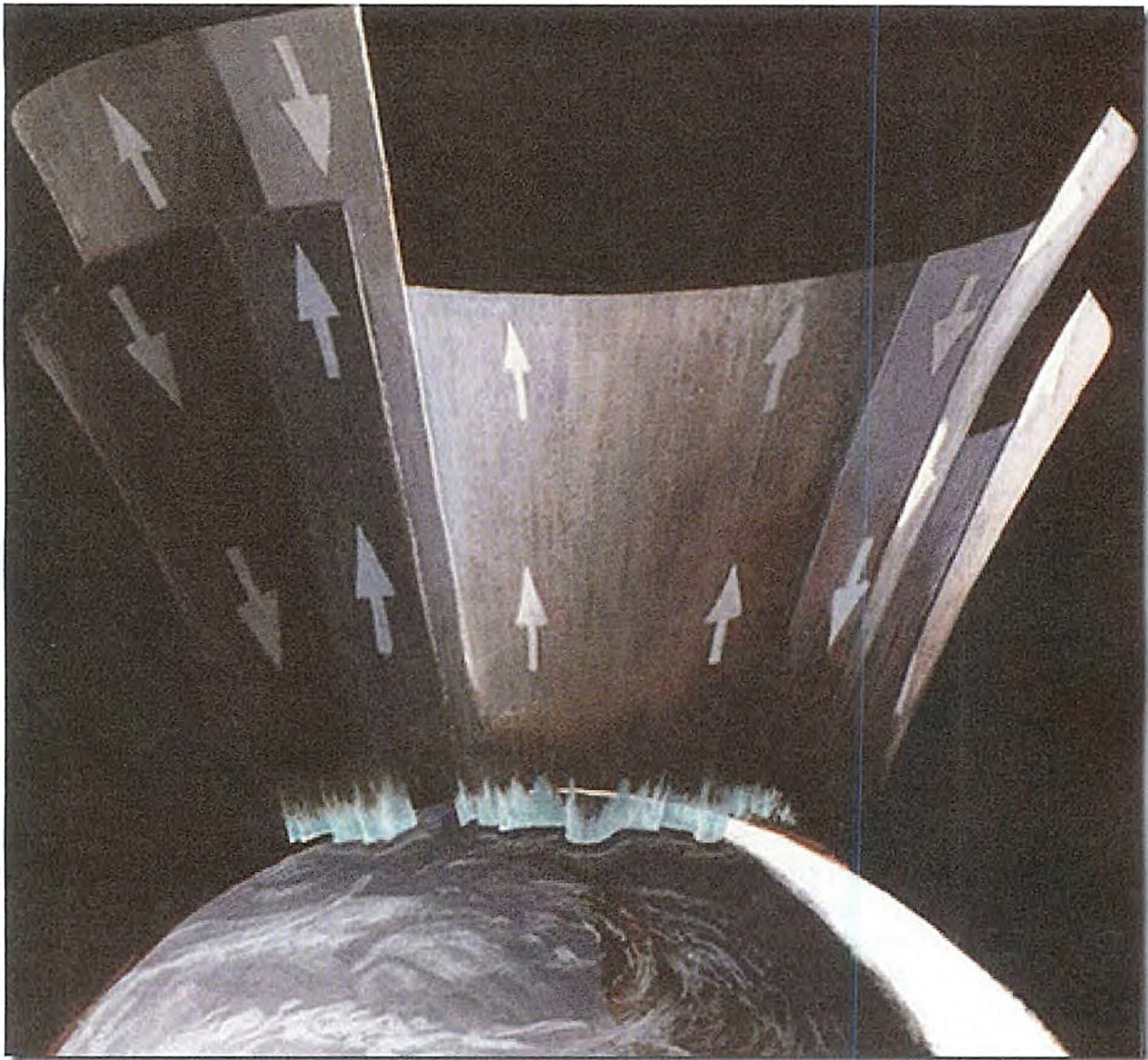
<sup>3</sup> *Ibid.*

<sup>4</sup> A. L. Peratt, *op. cit.*, p. 1193.

<sup>5</sup> B. Steigerwald, "Fast Spacecraft Discovers Invisible Aurora," *University of California, Berkeley, News Release* (December 14, 1999).

<sup>6</sup> *Ibid.*





**The double-funnel shape formed by the incoming and outgoing Birkeland currents over Earth's polar regions which account for the auroral ovals as seen from space.**

(Illustration courtesy of S. G. Smith, Applied Physics Laboratory, Johns Hopkins University.)

as a unified form of anything, least of all a tubular structure or a funnel of any sort, from anywhere on Earth.

And then, when all is said and done, the overall polar structure Peratt really portrays is a vast plasmatic sheath that encloses the entire world in a colossal hollow cylinder that expands to more than Earth's circumference at the equator.<sup>1</sup> This colossal hollow cylinder would have

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<sup>1</sup> A. L. Peratt, *et al.*, "Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity Part II: Directionality and Source," *IEEE Transactions on Plasma Science*, Vol. 35, No. 4 (August 2007), p. 802.



been so much vaster than Zysman's postulated auroral tube that it would have been even less possible to see as a distinct pillar supporting the sky above. With humankind contained *within* its towering hollow, it would at best have looked like the tapering inside of a colossal hollow cylinder, which is probably why van der Sluijs felt compelled to compare it to the tunnel of light that near-death survivors have been known to report.<sup>1</sup> Whatever such a miasmatic image might have looked like, it would never have appeared as a "downward flow of light from above"<sup>2</sup> that was then likened to such items as a whirlwind, the god's single leg, his phallus, or the sky-supporting pillar, the fiery axis of mythic fame,<sup>3</sup> to say nothing of other related items we shall be discussing in future volumes of this series.

It will be pointed out that Peratt supports his hypothesis through laboratory experiments involving the pulsed ejection of high-voltage currents—through the use of various high-explosive generators at the Los Alamos National Laboratory and elsewhere—into puffs of gas in order to simulate aurora-like plasma inflows.<sup>4</sup> Also included in the apparatus required for these experiments to duplicate what was already known about high velocity shock waves and plasma discharges was the additional burden of paraphernalia such as wire arrays and nested cylindrical foils.<sup>5</sup> As Peratt himself explains, these experimental tests come "close" to replicating the "expected" singularity "when a giga-ampere current impinges on the Earth."<sup>6</sup> But while these experiments were successful in reproducing the plasmatic column that Peratt was after, even if



Facsimile of Peratt's simulation of the plasma sheath encasing the entire world.  
(Illustration by Richard M. Smith.)

<sup>1</sup> R. van der Sluijs, "The Spirit of Mythology—Part Two," Picture of the Day, *thunderbolts.info* (April 11, 2008), p. 2.

<sup>2</sup> W. Barnstone, *The Other Bible* (San Francisco, 1984), p. 656.

<sup>3</sup> See *God Star*, pp. 429-451, 457; *Flare Star*, pp. 227, 236-249

<sup>4</sup> A. L. Peratt, "Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity," *IEEE Transactions on Plasma Science*, Vol. 31, No.6 (December 2003), p. 1194.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Idem, et al.*, "Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity Part II: Directionality and Source," *IEEE Transactions on Plasma Science*, Vol. 35, No. 4 (August 2007), p. 779





Kristian Birkeland—1867-1914

diminutive in size, none of these short-lived phenomena came close to mimicking auroral curtains.

Rather than wire arrays and nested cylindrical foils, what is perhaps required in order to duplicate auroras is an electro-magnetized globe to serve as target Earth. This is the kind of apparatus that Kristian Birkeland used at the turn of the nineteenth century, as have others since then, to reproduce his auroral simulations.<sup>1</sup> We notice, though, that, contrary to Peratt's experiments, no columnar structures have yet been propagated through the utilization of these terellas. It thus seems that auroral curtains—or even funnels for that matter—and plasma columns can only be achieved through different, even if related, plasma excitations.

Let us, however, keep in mind that Peratt did not restrict his speculations to solar-induced auroras, which he himself refers to as “suggestions.”<sup>2</sup> Included in his theorizing was the realization that the phenomenon being discussed could also come about “if another source of plasma were to enter the solar system.”<sup>3</sup> And it is precisely such a plasma from

“another source” that forms the basis of our own particular postulate.

So let us not misunderstand. That the stationary erect pillar dictated by myth was a sustained Birkeland current we have accepted since Wallace Thornhill proposed it in 1997,<sup>4</sup> which proposal was upheld by Peratt himself.<sup>5</sup> And, in keeping with *some* of the above, we also accept this current to have been both filamentary and uniformly cylindrical in shape<sup>6</sup> or, as Hannes Alfvén phrased it, a rotating,<sup>7</sup> but hollow, axis of nested plasma cylinders.<sup>8</sup> Thus,

<sup>1</sup> See *Primordial Star*, pp. 291 ff. for the entire series of experiments here discussed.

<sup>2</sup> A. L. Peratt, *et. al.*, *op. cit.*, p. 804.

<sup>3</sup> *Idem*, “Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity,” *IEEE Transactions on Plasma Science*, Vol. 31, No.6 (December 2003), p. 1210.

<sup>4</sup> See *God Star*, p. 461.

<sup>5</sup> *Ibid.*

<sup>6</sup> H. Dahlgren, *et al.*, “Filamentary Structures in Planetary Nebulae,” *Astrophysics and Space Science* (published online: March 29, 2007), p. 66.

<sup>7</sup> H. Alfvén, *Cosmic Plasma* (Dordrecht, Holland, 1981), p. 36.

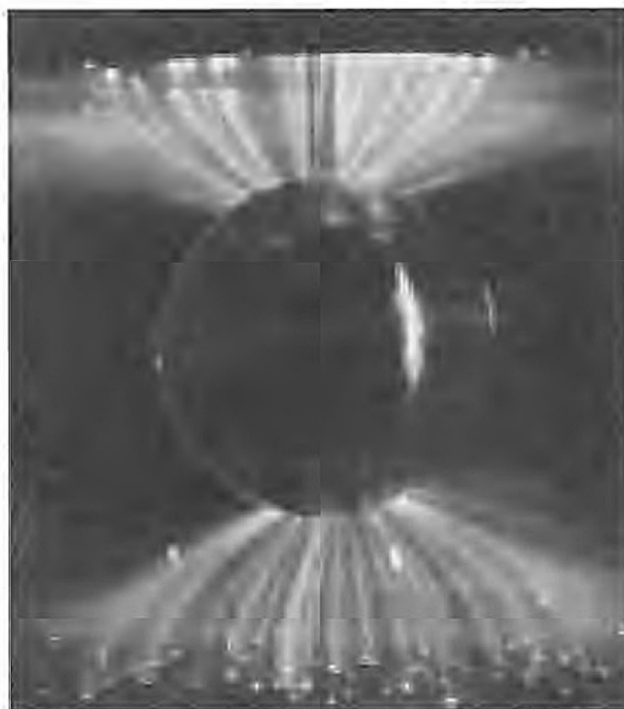
<sup>8</sup> *Ibid.*, pp. 25-26.

rather than an auroral apparition, the polar column we have in mind is more akin to the cosmic jets many of which have been detected, and even photographed, especially in relation to Herbig-Haro objects.

## SUSTAINED AXIAL DISCHARGES

It was Kristian Birkeland who first discovered that electric currents in mid-air, or in mid-space, tend to follow twisted paths, which is why these currents are now called by his name. Occurring in pairs, these filamentary couples are known to rotate in the manner of rigid bodies, which rotation is held responsible for their twisting around each other in corkscrew fashion. Among other factors, the visibility or otherwise of these streams is reliant on the attainment or failure of balance between their electrical potential and that of the plasmaspheric space, or cell, in which they occur. It is the disparity in the property of these streams that stems from the electrical disproportion that can attain in these respective cells that often leads to visible discharges the sustaining of which depends on the differing factors of their environment. Whether visible or not, the length of time of their existence varies in accordance with the property of their surroundings during which they shift in form as they evolve in response to the changing energy of their source.<sup>1</sup>

Although it has not been called so, such a sustained Birkeland current of astronomical proportions has been discovered emanating from our own Milky Way. Calculated to be some 80 light-years long, it is about 300 light-years from the center of the Galaxy, perpendicular to its rotational plane, and connected to the circum-nuclear disk surrounding it. Having been formed by the twisting filamentary currents described above, it was originally referred to as the DNA Nebula, but was later renamed the Helix, or Double Helix, Nebula. What is seen, Mark Morris reported, are "two intertwining strands wrapped around each other as in a DNA molecule."<sup>2</sup>

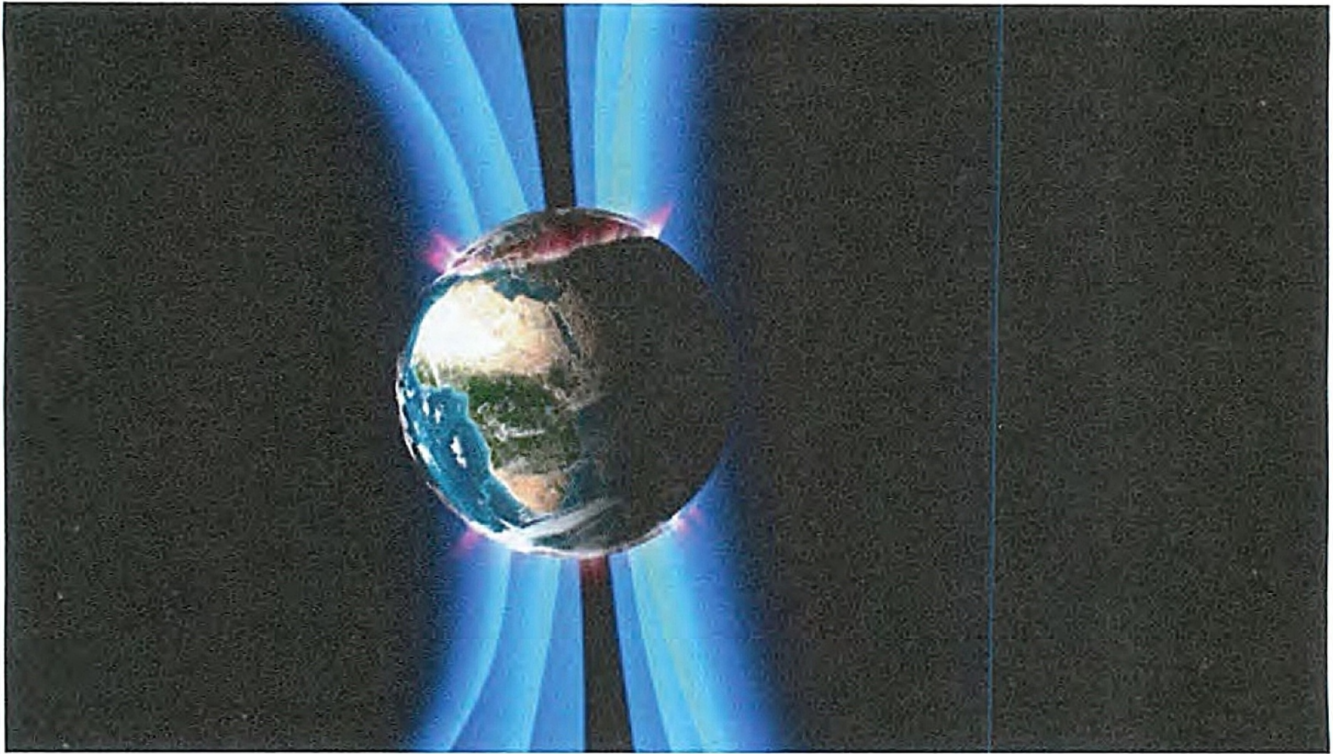


Currents forming auroral funnels produced by Birkeland on the poles of one of his terellas. Compare with S. G. Smith's rendition on page 80. (NOTE: What looks like a central pillar at the top is actually the rod that holds the terella in suspension.)

<sup>1</sup> See here, for instance, G. F. Gahm, *et al.*, "Rotating Elephant Trunks," *Smithsonian/NASA ADS Astronomy Abstract Service* (11/07/2007), pp. 1-2.

<sup>2</sup> S. Wolpert, "Astronomers Report Unprecedented Double Helix Nebula Near Center of the Milky way," *UCLA News* (March 16, 2006 on the Internet), p. 2.





Simulation of Earth's magnetic field showing the electro-magnetically neutral zones at both poles.  
(Illustration courtesy of NASA.)

"It's like having two strands of rope connected to a fixed point [he went on]. As you spin the strands, they braid around each other in a double helix fashion."<sup>1</sup>

The "recipe" for such a structure, it has been pointed out, "is strict but simple." All that is required, or so it has been claimed, is "a strong magnetic field, a rotating body, and a nebulous cloud of material positioned just right."<sup>2</sup> What the above omits is the electric current responsible for the "strong magnetic field." A better recipe had been submitted in 1979 by the same Peratt whose work on plasma columns we discussed above. Basing his work on that of Hannes Alfvén, he modeled the effects electromagnetic vortices would have on plasma clouds. He found that, in this manner, he could mimic the formation of various spinning galaxies, some of which were seen to spout bipolar jets of plasma from their concentrated cores.<sup>3</sup> This was accomplished through computer simulations and while, as Eric Lerner indicated, these do not constitute "the real world," Peratt was vindicated when, in 1984, the jet described above was first observed emanating out of the Milky Way.<sup>4</sup>

As we pointed out in earlier volumes of this series, ours is not the only galaxy that emits such sustained axial discharges.<sup>5</sup> Nor can these be blamed on the often claimed existence of

<sup>1</sup> B. Carey, "Cosmic 'DNA': Double Helix Spotted in Space," *Space.com* (March 15, 2006).

<sup>2</sup> *Ibid.*

<sup>3</sup> E. J. Lerner, "The Big Bang Never Happened," *Discover* (June 1988), p. 75.

<sup>4</sup> *Ibid.*

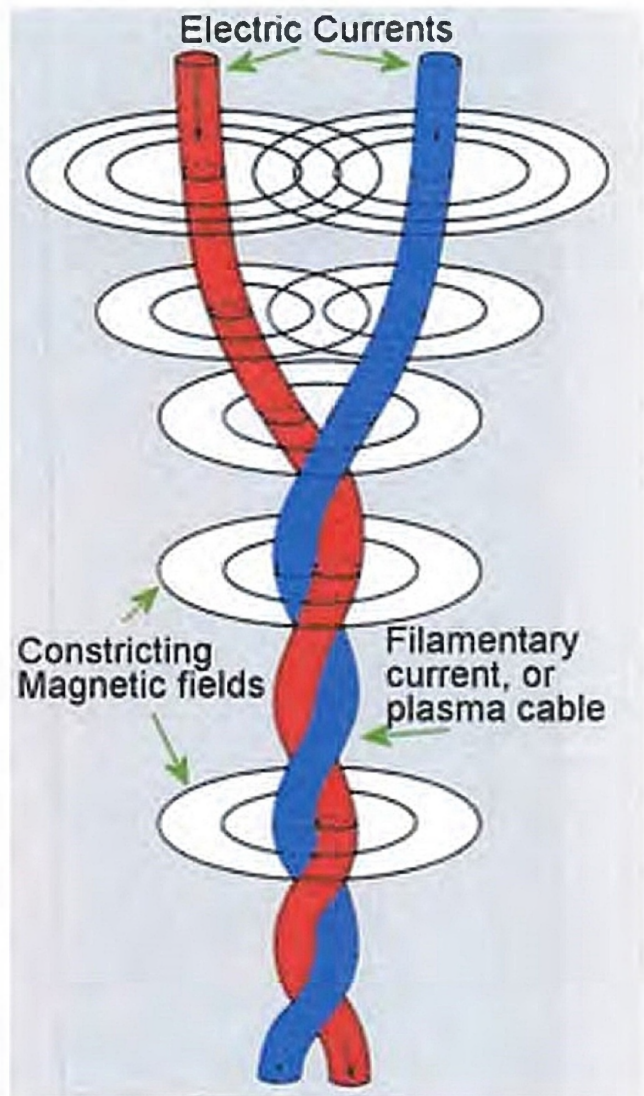
<sup>5</sup> *God Star*, pp. 424 ff.; *Flare Star*, pp. 146 ff.



black holes in galactic centers.<sup>1</sup> In fact, galaxies are not the only objects in the Universe that harbor such emissions. ally referred to as jets,<sup>2</sup> these linear rents are also emitted by stars, despite the fact that stars are not known to harbor black holes in their center.<sup>3</sup>

One helical stream that has been likened to a twisting cosmic tornado is found attached to a star in Herbig-Haro 49/50.<sup>4</sup> And although it is said that it's "not ly spinning,"<sup>5</sup> others have been likened to a "spinning lawn sprinkler."<sup>6</sup> One thing, out of many, to keep in mind here is that most of the rotational motion in the entire Universe is powered by "the dynamic effects of plasmas moving in, across, and with magnetic fields."<sup>7</sup> One such optically-visible jet spiraling outward from both poles of an infant star in what is now dubbed Herbig-Haro 211 is to be found in the constellation Perseus.<sup>8</sup>

Various theories have been proposed to account for the creation of cosmic jets, all of which end up competing with each other without resolving the question of their generation.<sup>9</sup> One actually wonders at certain claims that have been offered in relation to their formation. The "cause of the



**Ideal view of a Birkeland current**

<sup>1</sup> W. H. Bostick, "What Laboratory-Produced Plasma Structures Can Contribute to the Understanding of Cosmic Structures Both Large and Small," *IEEE Transactions on Plasma Science*, Vol. PS-14, No. 6 (December 1986), p. 705.

<sup>2</sup> See, here, *Primordial Star*, pp. , 6, 81, 84, 231, 235, 245, 258.

<sup>3</sup> "Neutron Stars Spew Like Black Holes," *SPACE.com* (June 27, 2007)

<sup>4</sup> L. Kruesi, "Stellar Jet Makes a Space Tornado," *Astronomy* (May 2006), p. 29.

<sup>5</sup> R. Naeye, "Cosmic 'Twister'," *Sky & Telescope* (April 2006), p. 20.

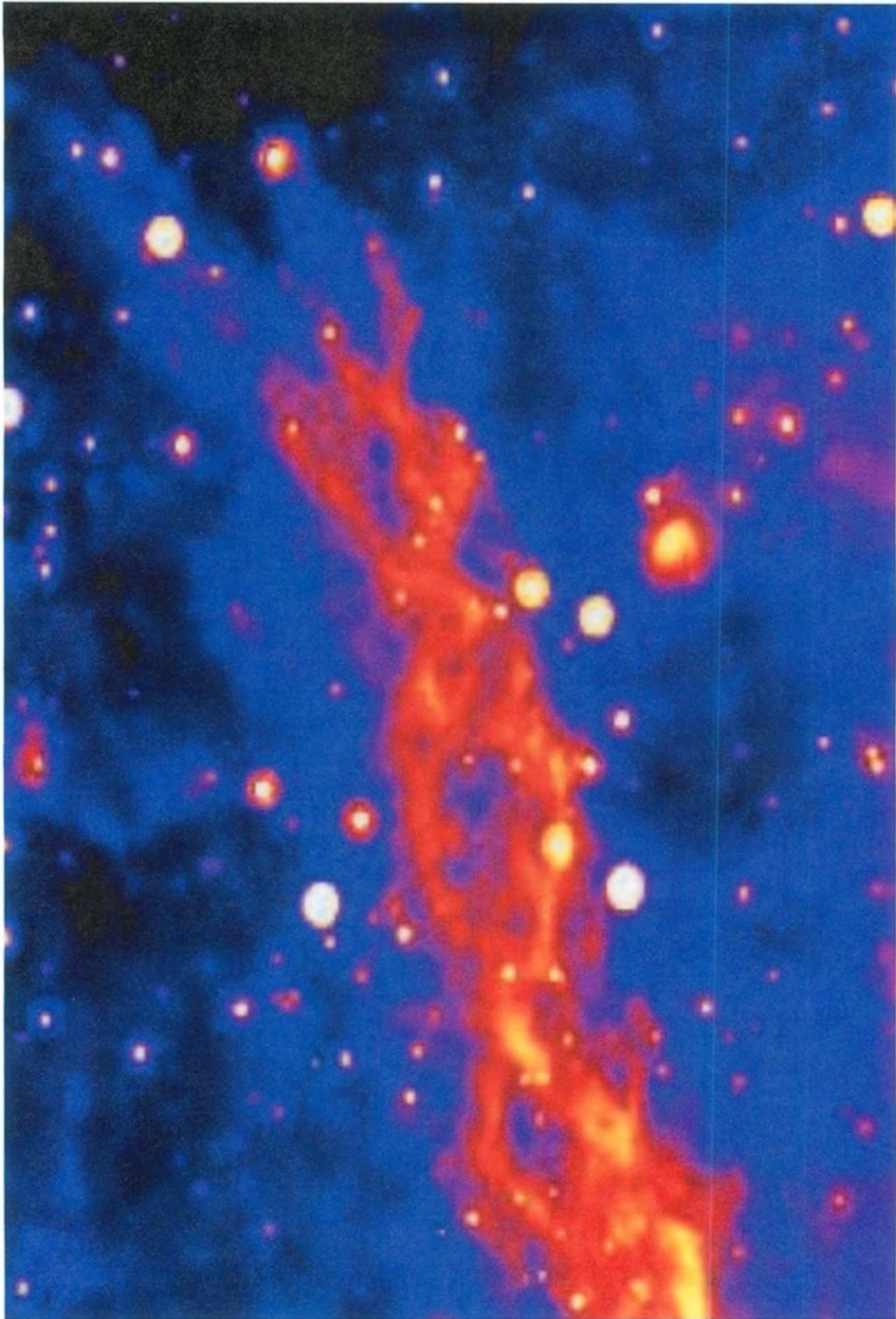
<sup>6</sup> R. Zimmerman, "A Visit to the High-Energy Zoo," *Astronomy* (February 2005 Special Issue—*Exploring the Universe*), p.40.

<sup>7</sup> W. H. Bostick, *op. cit.*, pp. 703, 705.

<sup>8</sup> J. Bryner, "Jets Spiral in 'Reverse Whirlpool' from Star," *SPACE.com* (December 28, 2007).

<sup>9</sup> See here, for instance, T. P. Ray, "Fountains of Youth," *Scientific American* (August 2000), pp. 43 ff.; A. Thompson, "New Clues to the Most Amazing Shapes in Space," *SPACE.com* (March 18, 2008), p. 2





**False color image of the Double Helix Nebula.**  
(Photograph courtesy of NASA.)



helical shape” of Herbig-Haro 49/50 was said to be unknown,<sup>1</sup> although it was surmised that “magnetic fields” might have something to do with it.<sup>2</sup> The opposing polar “corkscrew jets” emanating out of the star known as W43A in Aquila are also said to be sculpted by magnetic fields,<sup>3</sup> even though, believe it or not, some have claimed these jets to be actually made of water.<sup>4</sup> (Talk about “spinning lawn sprinkler” effects!) While there had been a time when magnetic fields were shunned by most astronomers, they are now spoken of as if they had long been known and accounted for. “*After all,*” Adam Frank recently wrote, “magnetic fields...are found almost everywhere in space and are powerful enough to shape much of what goes on there.”<sup>5</sup> Even so, magnetic fields are not enough, especially since magnetic fields require a stream of electricity.<sup>6</sup> It almost makes one think that astrophysicists have never heard of Birkeland currents.



**Herbig-Haro 49/50.**  
(Photograph courtesy of NASA.)

It was in 1995 that Bruce Remington, a physicist who was then working at the Lawrence Livermore National Laboratory in California, noted that computer simulations of a supernova discharge were identical to a turbulent mixing of plasma in laser-fusion lab experiments. He thus surmised that such experiments could shed light on astrophysical phenomena by scaling up laboratory-derived effects to cosmic dimensions. In association with the theorist Dmitri Ryutov, he was able to show that the same physics applied at both microscopic and astronomical scales.<sup>7</sup> “We can’t create a supernova or an astrophysical jet,” Remington pointed out, “but we can create little pieces of those phenomena in a rigorously scaled setting.”<sup>8</sup> But, as revealingly important as this discovery turned out to be, it was nothing new since Alfvén had already brought it to public attention long before.<sup>9</sup> Or how easily they forget.

During the same 1990s, Paul Bellan, another physicist hailing from the California Institute of Technology, noted that the plasma gun he was using produced curious emissions which ap-

<sup>1</sup> R. Naeye, *loc. cit.*

<sup>2</sup> *Ibid.*; L. Kruesi, *loc. cit.*

<sup>3</sup> L. Layton, “Magnetic Fields Shape Dying Star’s Jets,” *Astronomy* (August 2006), p. 26.

<sup>4</sup> K. S. Chadha, “In Brief,” *Astronomy Now* (April 2006), p. 19.

<sup>5</sup> A. Frank, “In the Cradle of the Stars,” *Discover Presents the Whole Universe* (special edition of *Discover*, Fall 2008), p. 48 (emphasis as given).

<sup>6</sup> See here, for instance, B. Hills, *Origins: Cosmology, Evolution & Creation* (Cambridge, 2003), pp. 36-37.

<sup>7</sup> S. Nadis, “How Astronomers Capture the Universe in a Test Tube,” *Astronomy* (July 2007), p. 35.

<sup>8</sup> *Ibid.*

<sup>9</sup> E. J. Lerner, *op. cit.*, pp. 74-75.

peared to be miniatures of the much more intense astrophysical jets. He, too, seems not to have heard of Alfvén's previous disclosures on the subject when he announced that physics must be scalable.<sup>1</sup> All of a sudden, laboratory-created plasma jets became a dime a dozen.<sup>2</sup> But, despite the supplanting of one theory by another,<sup>3</sup> these lab-produced jets failed to reveal their secrets to all those who continued to shun the high-energy electric discharges in plasma that are really responsible for their formation.

As noted above, the Milky Way's galactic jet is said to be associated with what is termed its circum-nuclear disk. And, to be sure, cosmic jets are usually found ejecting out of circum-stellar disks.<sup>4</sup> This has special meaning to us because, as noted in our previous volumes, Earth's primordial proto-Saturnian sun was also surrounded by such a disk.<sup>5</sup>

Stars that harbor jets are believed to still be in the early stages of their formation.<sup>6</sup> Such jetting nascent stars are exemplified by the X-ray-emitting DG Tau,<sup>7</sup> HH (that is Herbig-Haro) 30,<sup>8</sup> and HH 211.<sup>9</sup> Jets, however, also result when old stars tend to flare up as supernovae. In fact, some hold that it is jets that trigger these enormous super flares.<sup>10</sup> Judging by the Crab Nebula, which constitutes the remains of the supernova of 1054 A.D., circumstellar disks and jets continue to activate stars long after their initial outbursts.<sup>11</sup>

The remaining star at the center of the Crab is known as a pulsar due to the cyclical pulses it continues to generate. A similar pulsating light-emitter is the Vela pulsar, which is also the remnant of a supernova. Like the Crab Nebula, the Vela pulsar is also surrounded by circum-stellar disks, or rings, while jetting similar axial streams. Additional to that, very much as we have hypothesized for the proto-Saturnian system,<sup>12</sup> both these pulsars are traveling through space in a poleward direction,<sup>13</sup> as so, also, is the manner in which so-called neutron stars, as well as other stars, are seen to travel.<sup>14</sup>

Except for matters of detail and a few new discoveries, the information we have just presented had already been offered in our previous volumes. Reiteration has however been called

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<sup>1</sup> S. Nadis, *op. cit.*, p. 36.

<sup>2</sup> *Ibid.*

<sup>3</sup> See, for instance, "First Laboratory Experiment to Accurately Model Stellar Jets Explains Mysterious 'Knots'," *University of Rochester—physorg.com* (February 9, 2009), which was reproduced verbatim as "How Magnetic Forces Shape Cosmic Jets of Matter Streaming Out of Stars," *sciencedaily.com* (February 10, 2009).

<sup>4</sup> See here, for instance, J. Bryner, *loc. cit.*; A. Thompson, *loc. cit.*; W. Thornhill, "Electricity or Gravity: Which Rules the Universe?" *Chronology & Catastrophism Review* (2008), p. 95.

<sup>5</sup> *God Star*, pp. 261 ff.; *Flare Star*, pp. 217 ff.

<sup>6</sup> J. Winters, "A Brief Tour of a Cosmic Neighborhood," *Discover Presents the Whole Universe* (special edition of *Discover*, Fall 2008), p. 46.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> J. Bryner, *loc. cit.*

<sup>10</sup> W. Schomaker, "Jets May trigger Supernovae," *Astronomy* (April 2001), p. 26.

<sup>11</sup> R. Zimmerman, *op. cit.*, p. 38.

<sup>12</sup> *Flare Star*, pp. 260-261.

<sup>13</sup> "Do All Pulsars Fly Pole-First," *Sky & Telescope* (September 2000), p. 20.

<sup>14</sup> [www.universetoday.com](http://www.universetoday.com) (January 21, 2005); A. MacRobert, "Neutron Stars Flying Pole-First," *Sky & Telescope* (February 2006), p. 20.





**Axial jet and circumstellar disk surrounding the Crab Nebula, remnant of the supernova of 1054.**  
(Combined images from the Hubble Space Telescope and the Chandra X-Ray Observatory—courtesy of NASA.)

for in order to contest the auroral interpretation of the mythological axial column. It is, of course, in the nature of a stellar jet—or, in our case, a sub-stellar one—that we have envisioned the polar column of the ancients. There was, in our opinion, absolutely nothing auroral about its formation and/or appearance. More importantly, it had nothing to do with our present Sun since its manifestation predated Earth's entry into the Solar System. At the time I





Oblique false-color view of the axially jetting Vela pulsar surrounded by its circumstellar rings.  
(Image courtesy of NASA.)

first proposed a columnar outflow from a brown dwarf, these sub-stars had not yet unmasked themselves completely. Circumstellar disks around these sub-stellar denizens had been detected,<sup>1</sup> but not jets. It was in fact believed by some that these stellar dwarfs “are not active enough to produce polar jets.”<sup>2</sup> But when I bounced the concept off an astrophysicist in 2003, it was not thought to be atrocious.<sup>3</sup> Less than a year later, spectral lines proclaimed the existence of dwarf jets,<sup>4</sup> which continue to be detected as the years go by. Four of those discovered in 2008 are believed to be emitted by newborn dwarfs, which are claimed to be more star-like than their previous designation of “failed stars” seemed to suggest.<sup>5</sup> But if, as we have seen, jets can be propelled by nascent stars as well as older suns in superflares, why should not brown dwarfs also emit jets in adult age?

As we have, however, also noted in previous volumes, our posited primordial proto-Saturnian sun might not even have qualified as a brown dwarf star, which is why we have referred to it as a *sub*-brown dwarf. And while others have been asking whether such a less massive object could still emit a jet, Emma Whelan, from the Dublin Institute for Advanced Studies, has answered the question in no uncertain terms. “The new discoveries mean that jets are confirmed to flow from a huge range of objects, from tiny brown dwarfs to the largest...galaxies,” she reported. “This leads us to the tantalising prospect that even large planets may drive outflows and jets as they form.”<sup>6</sup> If it’s considered that large planets can drive outflows from their poles, a sub-brown dwarf, which in the end turned into one such planet, could just as easily have spawned polar jets.

What we should not forget, as already noted, is the polar column’s interpretation by our ancient forebears as various objects which changed with time as the sub-astral jet evolved

<sup>1</sup> K. Wright, “When a Star is Not a Star,” *Discover* (January 2002), p. 29; D. Kaisler, “The Puzzles of Planet-hood,” *Sky & Telescope* (August 2002), p. 35.

<sup>2</sup> W. Thornhill, on the private Intersect discussion group sponsored by KRONIA Communications (January 9, 2002).

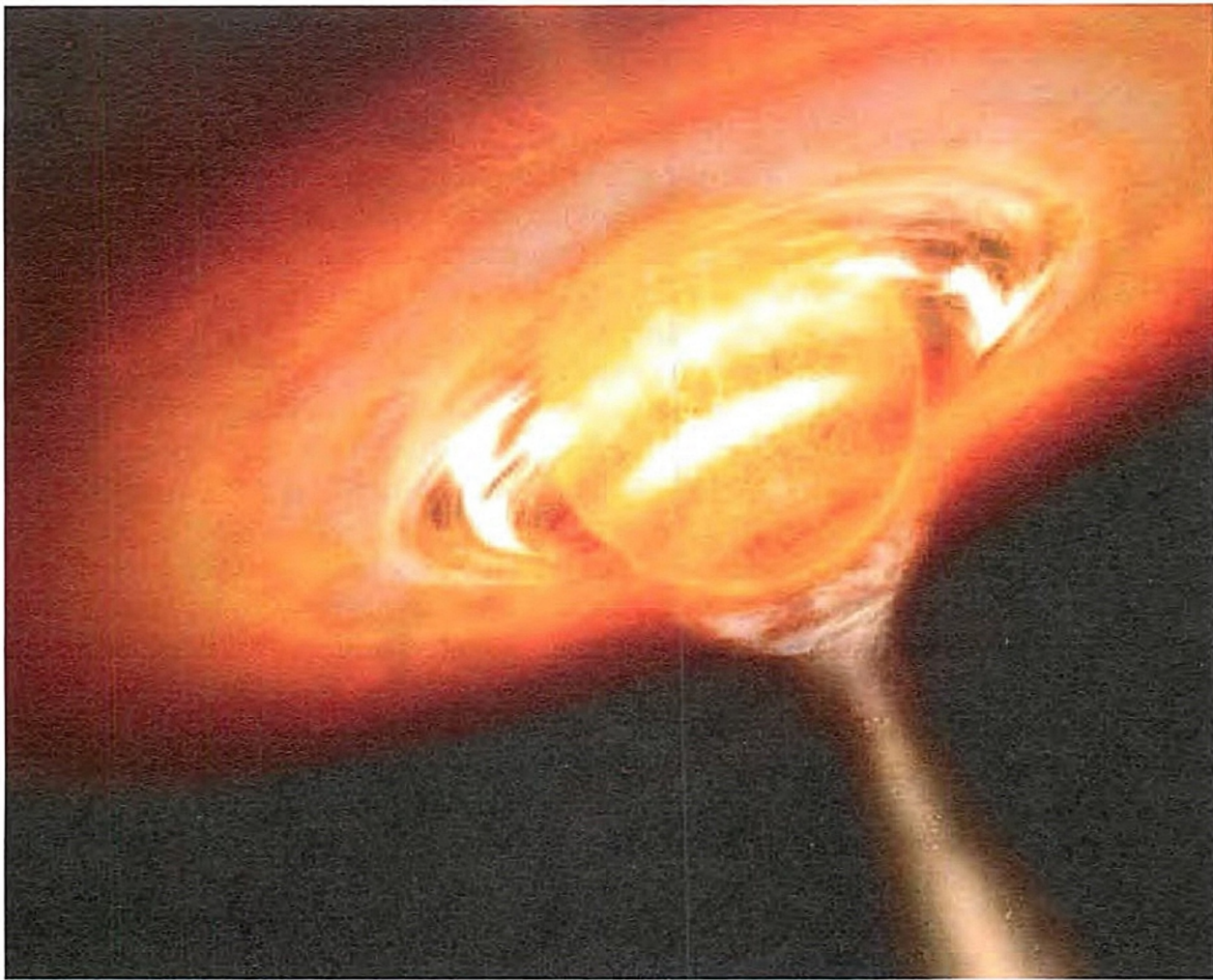
<sup>3</sup> D. Lin to D. Cardona, verbal communication at a family dinner on December 28, 2003.

<sup>4</sup> R. Naeye, “‘Free-Floating Planet’ Claims Bolstered,” *Sky & Telescope* (October 2004), p. 20.

<sup>5</sup> “Newborn Brown Dwarfs Stir Up the Neighborhood,” *sciencedaily.com* (April 4, 2008).

<sup>6</sup> *Ibid.*





Artistic impression of a jetting brown dwarf star.  
(Illustration courtesy of ESO.)

through its series of instabilities. Among the different items to which the column was compared, and to which we must return in order to better understand what transpired next, was the deity's virile member.<sup>1</sup>

### THE PHALLIC DEITY

That fertility rites commemorating what eventually became known as Mother Earth took place among primitive tribes, even down into modern times, is not contested.<sup>2</sup> Neither is it contested that some of these rituals were connected with the coming-of-age ceremonies that youngsters were usually made to undergo at puberty.<sup>3</sup> Even the insistence of the Kumeyaay of California that the sky is male, with the land below as female,<sup>4</sup> is explainable since rain from

<sup>1</sup> See *God Star*, pp. 441 ff.; *Flare Star*, pp. 236 ff.

<sup>2</sup> See here, for example, E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), pp. 100 ff.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, p. 104.

the sky does impregnate the land which then gives birth to life in plants. But there is more to phallicism than all that since the very Saturnian deity we are concerned with was believed to have had a phallic form.

Mankind's preoccupation with phallic worship stretches back to the end of the Ice Age, some 10,000 years ago. Stone phalli have come to light from as far back as the Stone Age,<sup>1</sup> some of which have recently been found in one of the earliest Neolithic precinct in the Nazareth Hills of the lower Galilee in northern Israel.<sup>2</sup> Others have surfaced in the megalithic temples of Malta which have been dated to around 6,000 years ago.<sup>3</sup> In India, some of the phallic stones which served as manifestations of the god Shiva were erected in the same Neolithic period,<sup>4</sup> while some have been dated to 4,000 years ago.<sup>5</sup>

In Japan, stone phalli remain as common as they had been in antiquity. "The visitor in modern Japan may see the relics of its once extensive phallic cult in a number of famous shrines," wrote Post Wheeler in 1952. "The observant traveler cannot stray far from the beaten track in Japan without coming upon some rustic rite which is significant of this early worship."<sup>6</sup> The island of Onogoro, Wheeler went on, "has always been celebrated for the number of stones of phallus and vulva shape found there."<sup>7</sup> And William George Aston, whom Wheeler cites, "records that he found the road from Utsunomiya to Nikko lined with stone symbols, and many country neighborhoods still show a multitude of *phalloi* scattered along the highway or piled under the porches of old temples."<sup>8</sup>

The Hindu Shiva is so much associated with—when not altogether identified as—his own member that, in his manifestation of Virupaksa,<sup>9</sup> he is only worshipped as a linga and never in iconic form,<sup>10</sup> as so, likewise, is his avatar of Mailara.<sup>11</sup>

The reverence of the phallus as a god in itself was not restricted to India. The ancient Egyptians, too, revered a phallus god whose name was Aai, one of the cognomens of Ra himself,<sup>12</sup> whose Saturnian identity we need not re-stress. *M'tha au*, an ancient Egyptian term with the meaning of "Long Phallus," was actually a title of Osiris,<sup>13</sup> yet another deity identifiable as proto-Saturn.

But back to India. As stated earlier, we do not much agree with what Graham Hancock

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<sup>1</sup> R. Rudgley, *The Lost Civilizations of the Stone Age* (N. Y., 1999), p. 187.

<sup>2</sup> "Prehistoric Funerary Precinct Excavated in Northern Israel: Grave Goods Include Phallic Figurines, Sea Shells," *sciencedaily.com* (September 3, 2008).

<sup>3</sup> E. C. Krupp, *op. cit.*, p. 128; N. B. Lewis, "Mother Goddesses and Megaliths: Notes from Malta," *Archaeology Odyssey* (January/February 2004), p. 17.

<sup>4</sup> H. Zimmer, *Myths and Symbols in Indian Art and Civilization* (Princeton, 1974), p. 126.

<sup>5</sup> J. M. Kenoyer, *Ancient Cities of the Indus Valley Civilization* (Oxford, 1998), p. 110.

<sup>6</sup> P. Wheeler, *The Sacred Scriptures of the Japanese* (N. Y., 1952), p. 401.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> A. Verghese, *Archaeology, Art and Religion: New Perspectives on Vijayanagara* (New Delhi, 2001), pp. 7, 40.

<sup>10</sup> *Ibid.*, p. 95.

<sup>11</sup> *Ibid.*, p. 142.

<sup>12</sup> E. A. W. Budge, *An Egyptian Hieroglyphic Dictionary*, Vol. I (N. Y., 1920/1978), p. 110.

<sup>13</sup> *Ibid.*, p. 291.



has presented to the world, but one thing he clearly understood was the Indic tendency for divine variability. “Very little in Hinduism is straightforward or exactly what it seems,” he wrote. “Identities change and merge, contradictions abound, one thing stands for another, gods may manifest in different ways at the same time, ambiguity is everywhere.”<sup>1</sup> Although not quite unique to Hinduism, the reason behind this had to do with our ancient forebears’ indetermination of what it was that had been splashed across the sky above their heads.

We are not about to state that we were wrong when we identified Shiva as one of various Indic deities personifying proto-Saturn.<sup>2</sup> His assimilation to Surya in his Khandoba incarnation proclaims the identity,<sup>3</sup> even though Surya is usually misunderstood as a personification of the Sun. That Surya could not, however, have been the *present* Sun is evidenced by the characteristics with which his personality was endowed. Thus, for instance, Surya is said to have been immobile in the sky<sup>4</sup> and, under the name Savitri,<sup>5</sup> to have actually shone at night.<sup>6</sup> These are two characteristics out of various others that fit the role of the proto-Saturnian sun but not that of our present stellar host.<sup>7</sup>

But even the above circuitous route is not really required since, after all, it is no secret that Shiva is also known as Shani,<sup>8</sup> the very Sanskrit name of the Saturnian planet.<sup>9</sup> Even so, it seems just as likely that Shiva originated as the proto-Saturnian *axis mundi*, which manifestation won him the epithets of Sthanuh, which means “pillar,”<sup>10</sup> as well as Kilah, with the same telling meaning.<sup>11</sup> This is why Shiva was also said to have revealed himself as a column of blazing light and scorching fire which pierced the sky.<sup>12</sup> He is thus believed to be one with his own linga, which we interpret as the very polar column of our discussion. Nor is this merely our own conjecture since the equation has long been known to others. Shiva’s “fiery lingam,” wrote Heinrich Zimmer, “is a form of the Axis Mundi” which can be “equated with the shaft of light” that penetrated Mother Earth.<sup>13</sup>

Shiva’s linga (or lingam) is also known as Dhruva,<sup>14</sup> which is the Sanskrit name of the Pole Star,<sup>15</sup> the place of which, as we have seen, had once belonged to Vishnu/Saturn, which further cements our conviction that the primordial proto-Saturn had been firmly fixed in Earth’s north celestial pole. At the bottom of this duality, as simplified by Zimmer, is the

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<sup>1</sup> G. Hancock, *Underworld: The Mysterious Origins of Civilization* (N. Y., 2002), p. 223.

<sup>2</sup> *Flare Star*, pp. 228-239, 241-245, 248, 283, 289, 306, 313.

<sup>3</sup> A. Verghese, *loc. cit.*

<sup>4</sup> *Satapatha Brahmana*, IV:3:4:9; V. S. Agrawala, *Sparks from the Vedic Fire* (Benares, 1962), pp. 82-83.

<sup>5</sup> M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 144.

<sup>6</sup> *Ibid.*, p. 145.

<sup>7</sup> For more on Surya as proto-Saturn see *God Star*, pp. 122, 132, 165, 216, 233, 252,

<sup>8</sup> V. S. Apte, *The Practical Sanskrit-English Dictionary* (Delhi, 1965), p. 907

<sup>9</sup> R.E. Hume, *The Thirteen Principal Upanishads* (Madras, 1965), p. 454; V. S. Apte, *op. cit.*, pp. 906-907.

<sup>10</sup> *Ibid.*, p. 1007.

<sup>11</sup> *Ibid.*, p. 358.

<sup>12</sup> M. C. Subramanian, *Glory of Arunachela* (India, 1999), pp. 93, 100.

<sup>13</sup> H. Zimmer, *op. cit.*, p. 128.

<sup>14</sup> *Ibid.*, p. 126.

<sup>15</sup> See *God Star*, pp. 232-236 for more on Dhruva.

realization that, in the earliest Puranas, Shiva merely served as a “mask,” that is a “function,” assumed by Vishnu.<sup>1</sup>

### DIVINE PENILE WITHDRAWAL

At this point we must return to an event which we had already described in some detail in a previous volume of this series.<sup>2</sup> As we had there explained, at some point in the mythological age, Ra cut off his own phallus.<sup>3</sup> So, also, was Shiva said to have castrated himself.<sup>4</sup> As George Harvey rightly stated,<sup>5</sup> the cutting of the genitals of Ouranos by Kronos, as told by the ancient Greeks,<sup>6</sup> is also a self castration since, as we have already noted, Ouranos was simply a different manifestation of the same Kronos/Saturn. Harvey thus understood these myths to have originated in relation “to the heavens” in order to account for “Saturn’s loss of the column which appeared to have reached from Earth to Saturn.”<sup>7</sup>

We must not, however, adduce from this that the column had been merely severed, since the same castrated Ra was understood by others as having had sexual union “with himself,”<sup>8</sup> which could best mean that the column was actually seen to retract itself straight up into the proto-Saturnian orb. Thus, to be sure, the castrated genitals of Ouranos are said to have been flung “into the stormy sea,”<sup>9</sup> which sea must be understood as the celestial one, that is proto-Saturn’s circumstellar disk. Thus, Ouranos’ castrated organ did not fall down, but *up*—straight up into the very stellar orb which had originally generated it.<sup>10</sup> As detailed in the *Shiva Purana*, under the name Rudra, Shiva’s own castrated linga was also said to have gone up into “the very sky.”<sup>11</sup>

From an astrophysical point of view, what had actually transpired was the electrical recoiling, and thus retraction, of proto-Saturn’s Birkeland jet.

### A TIME DEVOID OF TIME

The *Shiva Purana* also tells us that the so-called “arrival,” or manifestation, of the proto-Saturnian trinity—that is, Brahma, Vishnu, and Rudra/Shiva—was “unwitnessed,” and unknowable by the wisest of sages.<sup>12</sup> What this is telling us is that, as far as mankind was concerned, the proto-Saturnian luminary had always existed in the sky—that is, no one had witnessed its arrival or first manifestation.

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<sup>1</sup> H. Zimmer, *op. cit.*, p. 128.

<sup>2</sup> *Flare Star*, pp. 279 ff.

<sup>3</sup> E. A. W. Budge, *op. cit.*, p. 489.

<sup>4</sup> W. D. O’Flaherty, *Hindu Myths* (Harmondsworth, 1976), p. 140.

<sup>5</sup> G. R. Harvey, “Abraham and Phallicism,” *Chronology & Catastrophism Workshop* (1988:2), p. 10.

<sup>6</sup> Hesiod, *Theogony*, 178-208.

<sup>7</sup> G. R. Harvey, *loc. cit.*

<sup>8</sup> R. Van Over, *Sun Songs: Creation Myths from Around the World* (N. Y., 1980), p. 283.

<sup>9</sup> Hesiod, *loc. cit.*

<sup>10</sup> See also *Flare Star*, pp. 279-280 for more details on this particular event.

<sup>11</sup> W. D. O’Flaherty, *loc. cit.*

<sup>12</sup> *Ibid.*, p. 138.

More than that, with a sub-star stationed permanently in Earth's north celestial pole, an immobile sun that never set in a starless sky that reflected neither day nor night, there had been no way by which mankind could calculate the passage of time.<sup>1</sup> The Lakota Amerinds remember this as "the time when there was no time."<sup>2</sup>

The above disclosure seems to have caused difficulties among those who have been following the slow unraveling of our scenario. Thus, in a flattering review of my work, Laurence Dixon found it difficult to understand how decisions could be made by ancient man when there was "no frame of reference" to be had.<sup>3</sup> As I however replied, decisions by ancient man during the period concerned did not have to involve the telling of time. "A decision to go hunting," I then added as an example, "could have been reached and acted upon the spur of the moment, or simply shrugged off until later, when hunger, or an empty larder, would have demanded it."<sup>4</sup>

The lack of day and night at any time during Earth's past has also been contested through the evidence of coral fossils.<sup>5</sup> It has been stated that certain species of corals "not only have annual growth bands like trees, but also daily growth bands."<sup>6</sup> And since certain fossil corals have been assigned to the Devonian, it has been assumed that an annual plus a daily cycle would surely have ensued during this particular era.<sup>7</sup> The problem here is that coral polyps are insensitive to light,<sup>8</sup> so that the bands shown in their skeletons remain highly controversial.<sup>9</sup>

An additional reason for the inability to calculate the passage of time had to do with there having been no demarcation of seasons. Even those who have attempted to interpret man's ancient memories as reflections of what they believe to be Biblical truths have harped upon this state of affairs, even though they realized that Saturn was the one to blame. As Thomas Burnet wrote in his halting, awkward-spelling way: "The Ancients suppos'd, that in the reign of *Saturn*, who was an Ante-diluvian God, as I may so call him, Time flo'd with a more even motion, and there was no diversity of Seasons in the Year."<sup>10</sup> Among the ancients that Burnet had in mind were Virgil, who wrote about the time when Earth "had then one constant spring," and Ovid, who echoed the same words, which were then repeated by the likes of Alcimus Avitus and similar Christian authors in search of Biblical confirmation.<sup>11</sup>

In order to explain the existence of warm-loving animals in Arctic regions, even Charles Lyell, the very originator of uniformitarianism, had reason to suggest a previous time "in

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<sup>1</sup> See *God Star*, pp. 305 ff. and *Flare Star* (check the Index under "time") for much more on this subject.

<sup>2</sup> S. Eddy, *Native American Myths* (London, 2001), p. 9.

<sup>3</sup> L. Dixon, in a letter published in *Chronology & Catastrophism Workshop* (2008:3), p. 6.

<sup>4</sup> D. Cardona, reply published in *ibid.* (2009:1), p. 6.

<sup>5</sup> See here especially *God Star*, pp. 391 ff.

<sup>6</sup> B. Hills, *op. cit.*, p. 129.

<sup>7</sup> *Ibid.*

<sup>8</sup> J. W. Wells, "Pacific Islands," *Encyclopaedia Britannica* (1959 edition), Vo. 17, p. 7.

<sup>9</sup> T. A. Stephenson, "Anthozoa," in *ibid.*, Vol. 2, p. 35.

<sup>10</sup> T. Burnet, *The Sacred Theory of the Earth* (London, 1965), p. 136 (italics, capitalizations, and spelling as given).

<sup>11</sup> *Ibid.*, pp. 135-136.



which the temperatures of winter and summer were nearly equalized.”<sup>1</sup>

There are two questions we must now ask. How did the timeless era pass into one of time? And what was it that forced the retraction of proto-Saturn’s *axis mundi*? While we supplied an explanation to the second query in the second volume of our series,<sup>2</sup> the first one asked above remains unanswered. And yet, in order to provide a solution to this problem, we must briefly return to the reply we supplied for our first one before we can progress to those events we have not yet discussed. So let’s move on.

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<sup>1</sup> C. Lyell, *Principles of Geology*, Vol. I (Chicago 1970 reprint), p. 97.

<sup>2</sup> *Flare Star*, pp. 285 ff.

# Chapter 5

## Day One

### NEWCOMERS IN AN ALIEN SYSTEM

Our Galaxy has been overhauled. The renovation was made possible through the use of the National Science Foundation's Very Long Baseline Array—VLBA for short—which consists of a wide-spreading system utilizing 10 radio-telescopes that stretch from New England to Hawaii and the Caribbean. This interconnected array can produce images “hundreds of times more detailed” than what can be photographed by the Hubble Space Telescope.<sup>1</sup> It is claimed that the VLBA's “tremendous resolving power” is “equal to being able to read a newspaper in Los Angeles from the distance of New York.”<sup>2</sup> What this array has discovered is that very little of what we thought we knew about the Milky Way turns out to be so. Our galaxy, it has been found, contains 50% more mass than hitherto believed, while it is rotating 100,000 miles-per-hour faster than previously calculated. At the Sun's distance from the Milky Way's center, calculated at 28,000 light-years, our Solar System would be moving at 600,000 miles, as opposed to the previously-estimated 500,000 miles, per hour. Our greater mass also translates into a greater gravitational pull which increases our chances of another collision with an alien galaxy.<sup>3</sup> I say *another* collision because, as we had earlier brought to the attention of our readers,<sup>4</sup> it has been discovered that the Milky Way is even now colliding with the dwarf elliptical galaxy known as Sagittarius.

Yes, galaxies *do* have a tendency to collide with each other,<sup>5</sup> although “collide” may not be the proper term to use. In the meantime, the absorption of the Sagittarius galaxy by our own Milky Way continues to make news.<sup>6</sup> And although, as we have also noted, it has been denied that our Solar System actually belongs to Sagittarius rather than the Milky Way as others had proclaimed,<sup>7</sup> the very fact that Sagittarius is cutting across our Galaxy at right angles through the very region which harbors the Solar System just about speaks for itself.<sup>8</sup> What might be more telling is the additional fact that the Solar System's ecliptic plane, and thus its

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<sup>1</sup> *Harvard-Smithsonian Center for Astrophysics Press Release*, No. 2009-03 (January 5, 2009), p. 2.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*, p. 1.

<sup>4</sup> *Primordial Star*, pp. 355-358.

<sup>5</sup> See here, for instance, A. Thompson, “Hubble Photographs Dozens of Colliding Galaxies,” *space.com* (April 24, 2008).

<sup>6</sup> A. Thompson, *loc. cit.*

<sup>7</sup> Editor's note to “New Map of the Milky Way Shows Our Galaxy to be a Cannibal,” *The Bleeping Herald*, published by *Global Intelligent Press*, in the October 4, 2007 issue at [www.bleepingherald.com](http://www.bleepingherald.com)

<sup>8</sup> R. Jayawardhana, “How the Milky Way Devours its Neighbors,” *Astronomy* (March 2008 Special Issue—*All About Galaxies*), p. 37.

axial tilt, aligns with the oblique slant of Sagittarius and not the Milky Way. Nor am I speaking out of turn since astrophysicists themselves have realized that several stellar clusters which had previously been thought to be the Milky Way's progeny actually came from Sagittarius.<sup>1</sup>

Stars, of course, are known to wander and, yes, they do invade other systems. Some are thought to be ejected. Two "runaway stars" are even now "storming away from the Orion Nebula in nearly opposite directions faster than 100 kilometers per second."<sup>2</sup> Another star has not only been claimed to have invaded the same Nebula, but to have charged right through it.<sup>3</sup> Nor are we here talking millions of years ago. As noted by Jonathan Tan from Princeton University: "This star was ejected [out of the Orion Nebula] at a time within recorded human history, just after the building of the Great Pyramids of ancient Egypt."<sup>4</sup>

Runaway Stars continue to make news. Fourteen new such renegades were discovered while this book was being written. Called "high-velocity stellar interlopers" by an astronomer at NASA's Jet Propulsion Laboratory, they are tearing through space at more than 112,000 miles per hour.<sup>5</sup> While, according to Raghvendra Sahai, the discovery of these runaways came as "a complete surprise,"<sup>6</sup> the same source does admit that "stellar interlopers" of their kind have been observed since the late 1980s. But, as Sahai also reported, it is now believed that "the massive runaway stars observed before were just the tip of the iceberg."<sup>7</sup>

Stars from Sagittarius have not only been adopted by the Milky way, there are something like 1,200 stars, among them Gliese 710, that are heading "straight toward us."<sup>8</sup> Some of these stellar individuals are even now streaming closer to the Solar System's present position. This is so true that stars in our stellar neighborhood vary in their chemical composition from the Sun when, had they all been siblings, they should all have shared the same chemical makeup. Astronomers now believe that these particular stars could not have been born anywhere close to our Sun.<sup>9</sup> "Stars from an alien galaxy," Steven Majewski reported, "are relatively near us."<sup>10</sup> Forget "alien galaxy." If, as we proclaim, the proto-Saturnian system had its origin in Sagittarius, we're actually home, *even though still foreign to the Solar System*.

Regular stars—if any stars can be called that—are not the only stellar bodies known to be ejected from their systems. Brown dwarf stars are also thought to be evicted by their hosts<sup>11</sup> (although actual formation through ejection is disputed by the best authorities).<sup>12</sup> And as

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<sup>1</sup> *Ibid.*

<sup>2</sup> P. L. Gay, "Tracking Orion's Runaways," *Sky & Telescope* (August 2004), p. 24.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> "Runaway Stars Go Ballistic," *space.com* (January 7, 2009).

<sup>6</sup> *Ibid.*, p. 1.

<sup>7</sup> *Ibid.*, p. 2.

<sup>8</sup> J. Winters, "A Brief Tour of a Bad Cosmic Neighborhood," *Discover Presents the Whole Universe* (special edition of *Discover*, Fall 2008), p. 42.

<sup>9</sup> S. Smith, "Misplaced Mavericks," Picture of the Day, *thunderbolts.info* (September 26, 2008), pp. 1-2.

<sup>10</sup> R. Jayawardhana, *loc. cit.*

<sup>11</sup> R. Naeye, "Binary Sheds Light on Brown Dwarf Formation," *Sky & Telescope* (October 2004), p. 22.

<sup>12</sup> *Ibid.*



we've pointed out in previous volumes of this series, even planets are now known to be floating free in space unbound to any star. As it has been said, these, in fact, "could be the most plentiful objects in our galaxy."<sup>1</sup> A few of these may even be captured into orbit around stars to form new planetary systems or add their number to existing stellar families.<sup>2</sup>

"The existence of these isolated planetary-mass objects challenges the current knowledge of stellar and planetary formation," wrote Maria Zapatero Osorio, who then hailed from the Canary Island's Institute of Astrophysics.<sup>3</sup> "The atmospheres of [these] free-floating planets closely resemble those of brown dwarfs," she went on.<sup>4</sup> "In fact, brown dwarfs are the big sisters of free-floating planets."<sup>5</sup>

Moreover, very much like our own proto-Saturn, brown dwarfs are known to harbor planetary-mass objects—or, come to think of it, never mind planetary-mass objects. How about actual planets traveling through space in the company of brown dwarf stars?<sup>6</sup> What then is so bizarre with our postulate that the very planet beneath our feet had once been traveling through free space in the company of the proto-Saturnian sub-brown dwarf while the galaxy to which it belongs was amalgamating with the Milky Way? Similar mergers are in process even now.

There is a zone between the edge of the Solar System and the rest of the Milky Way—and/or the Sagittarius galaxy—the exploration of which is also giving astrophysicists a headache. Although, naturally enough, it was known to exist, none of our instruments had penetrated this domain until 2003. To use Kathy Sawyer's words, Voyager 1, which was launched in 1977, has become "the first human emissary to approach the boundary region where the sun's domain ends and the vastness of interstellar space begins."<sup>7</sup> And, as is becoming quite routine, what Voyager's instruments detected in this newly explored region led to the usual contesting theories of whatever it all means. Fraught with what has been described as "bizarre cosmic rays and other characteristics" not encountered in previous years of space exploration, this was truly "a new environment."<sup>8</sup> Mainly because the solar wind seems to clash against an unseen boundary, the region has been said to constitute a termination shock.<sup>9</sup> But what it was that Voyager 1 had managed to pass through was the Sun's heliospheric—that is plasmaspheric—double layer. This is the very place at which the interloping proto-Saturnian system's own plasmasphere first contacted that of the Sun. What then transpired formed the subject of our second volume in this series,<sup>10</sup> but we'll have a few items to add later in this very chapter.

Having entered the Sun's domain, proto-Saturn would have carried Earth with it through

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<sup>1</sup> D. J. Eicher, "Editorial," *Astronomy* (October 2006, Special Issue), p. 6; (see also article from same issue cited below, p. 47,

<sup>2</sup> M. R. Zapatero Osorio, "Planets Without Suns," in *ibid.*, p. 44.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> ESO insert in M. R. Zapatero Osorio's article, *op. cit.*, p. 46.

<sup>7</sup> K. Sawyer, "Voyager 1 Nears Edge of Solar System," *Washington Post* (November 6, 2003), p. A03.

<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> *Flare Star, in toto.*



**Ideal view of proto-Saturn complete with its circumstellar disk and axial column.  
(Illustration by Richard M. Smith.)**

that outer region of the Solar System known as the Kuiper belt. This consists of a vast area in which various bodies orbit in the most chaotic fashion that was never thought to be possible before their individual discoveries.<sup>1</sup> One of the latest to come to light, a 50-kilometer-wide hunk, which has been dubbed 2008 KV42, is about 35 times farther from the Sun than Earth. The rock, according to Brett Gladman, who then hailed from the University of British Columbia, is rotating at an angle that is almost perpendicular to the Solar System's ecliptic plane and in the opposite direction than the other bodies in the belt.<sup>2</sup> Together with the anomalous behavior of various other bodies in this region, this has been thought to indicate past cosmic disruptions in the area due to interloping bodies similar to what we have proposed for the proto-Saturnian system of our discussion.<sup>3</sup> The chances of the proto-Saturnian system disrupting some of these bodies as it spiraled through into the Solar System is not to be considered minimal. As Alan Stern rightly noted, the Kuiper belt is the largest structure in our planetary system and it's where most of the planetary bodies of the system happen to be.<sup>4</sup> Once outside the Kuiper belt, proto-Saturn would have had less chance of interacting with whatever planets were already under the Sun's protection which numbered much less than they do at present.

The Milky Way, after all, is not the only system that's undergoing renovations. Our solar neighborhood is also in disorder. The discovery of unusual objects in our surrounding area is often followed by an announcement similar to the one that greeted the discovery of 2008 KV42 mentioned above. This "find," Gladman noted, "could lead to a better understanding of how our solar system was formed."<sup>5</sup> The trouble is that few of those involved in the Solar System's reformation agree on what requires to be done. Some have been quite daring in their theorizing, such as those who have been proclaiming that the Solar System owes its origin to what they have termed a Little Bang. According to these brave theoreticians, our Sun is "the product of an explosive event." In other words, "a supernova, or exploding star" might have triggered the birth of our Sun in the dense cloud of gas and dust such an explosion would have created.<sup>6</sup>

Regardless of how the Solar System *was* created, most astronomers claim that, once formed, no planet could have changed its orbit. But why should a shifting planet perplex anyone? Is it because no such thing has ever been observed in *our* Solar System? Is our Solar System the only one we happen to know of? Have not enough planets been discovered in other solar systems? One exoplanet that has recently come to light is moving closer to its sun so fast it has stymied its discoverers.<sup>7</sup> Migrating planets in exoplanetary systems are now theorized to be so numerous as to constitute the norm.<sup>8</sup> If this is thought to be chaotic, keep the following in mind. Not that I accept the conventionally re-worked history of our Solar System

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<sup>1</sup> *Ibid.*, pp. 436-440, 467, 503-504; *Primordial Star*, pp. 342, 344, 353-354.

<sup>2</sup> N. Tomlinson, "Scientists Discover Object that Orbits Sun Backwards," *The Vancouver Sun* (September 5, 2008), p. A6.

<sup>3</sup> See reference #1, above.

<sup>4</sup> F. Guterl, "Journey to the Outer Limits," *Discover* (March 2006), p. 53.

<sup>5</sup> *Ibid.*

<sup>6</sup> "Our Solar System Born in 'Little Bang'," *space.com* (October 2, 2008).

<sup>7</sup> "Weird Worlds," *Chronology & Catastrophism Review* (2002:2), p. 44.

<sup>8</sup> G. Schilling, "Tracking Exoplanet Migration," *Sky & Telescope* (September 2003), p. 22.



in all its details, but even mainstream astrophysicists have come to the conclusion that our spatial neighborhood has experienced quite a bit of chaos in the past and that, in fact, it's still chaotic.<sup>1</sup>

If one wishes to delve into the erroneous belief that the stability of the Solar System was proven long ago, all one has to do is read the work of Ralph Abraham.<sup>2</sup> Laplace is usually cited when the stability of the Solar System is invoked, but those who cite him tend to ignore his main disclaimer. Laplace “won immediate fame for having provided the mathematical proof of the stability of the solar system that was missing in Newton,” wrote Abraham, “*despite the fact that he had specifically warned against such an interpretation.*”<sup>3</sup> Poincaré came next by claiming the prize offered by King Oscar II of Sweden for anyone who could actually prove the permanence of our System, but, as Abraham indicates, he ended up by proving nothing of the sort.<sup>4</sup> “When pressed,” wrote Clark Chapman, “most specialists in orbital theory admit that theorems of orbital stability in systems as complex as the solar system have yet to be rigorously proven.” And many other so-called facts about the Solar System, he went on, are built on nothing but assumptions.<sup>5</sup>

While those words were written during the second half of the last century, things have not really changed despite the fact that the popular media seldom reports on these incongruities. Peer-reviewed scientific periodicals are often not much better, but now and then the odd tit-bit does leak out. In July of 2005, as a for-instance, an article in one such journal was honest enough to report that, throughout its history, planet Earth has never been quite safe. It has in fact been prone to several hazards, the worst of which were the result of cosmically-induced catastrophes.<sup>6</sup>

Although it was once thought that stars tend to remain in the same galactic locality in which they happen to form, it is now believed that, in galaxies similar to the Milky Way, stars like our Sun can actually migrate over great distances.<sup>7</sup> More than that, even the Sun's role in the formation of the Solar System has finally been questioned. This came about through a stony meteorite that “exploded” over Pueblito de Allende, Mexico, in 1968. When analyzed, it was found to contain a strange mix of oxygen in the small mineral flecks lodged within it that are quite different from those found in terrestrial and lunar rocks as well as meteorites from Mars.<sup>8</sup> As it has been asked, how could such inclusions differ from planetary samples had the Sun been responsible for the chemical baptism of its entire brood?

Similar anomalous chemicals have also shown up in the dust collected by NASA's Stardust mission from Comet Wild 2 in 2004. The oxygen isotope signature from this comet has suggested “an unexpected mingling of rocky material between the center and edges of the so-

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<sup>1</sup> See, for instance, D. N. C. Lin, “The Genesis of Planets,” *Scientific American* (May 2008), pp. 50 ff.

<sup>2</sup> R. H. Abraham, *Chaos, Gaia, Eros* (N. Y., 1994), pp. 101-105, 178-192.

<sup>3</sup> *Ibid.*, p. 103 (emphasis added).

<sup>4</sup> *Ibid.*, p. 193.

<sup>5</sup> C. R. Chapman, *The Inner Planets* (N. Y., 1977), p. 41.

<sup>6</sup> K. Ravilious, “White-Knuckle Planet,” *New Scientist* (July 16-22, 2005), pp. 32-37.

<sup>7</sup> “Our Star Could Be Far from Where it Started,” University of Washington News Release, *spaceflightnow.com* (September 15, 2008); J. Hsu, “Sun May Be Galactic Hitchhiker,” *space.com* (September 22, 2008).

<sup>8</sup> “Theory of Sun's Role in Formation of Solar System Questioned,” *sciencedaily.com* (September 9, 2008).

lar system.”<sup>1</sup> And, once again, we find it stated that: “These findings are causing a revision of theories of the history of the solar system.”<sup>2</sup> The Solar System, it’s now believed, “may be more mixed up than previously thought.”<sup>3</sup>

What also came to light in 2008 is that Earth, too, is burdened with a cosmic problem. In September 8 of 2004, NASA’s Genesis spacecraft smashed to the ground in Utah’s desert, but many of its collectors survived the crash. One of these devices contained samples of the oxygen ingredients from the solar wind. This was important because whatever atoms populate the solar wind must represent those of the Sun itself. As it turned out, the solar wind, and thus the Sun, has proportionately far more oxygen-16 than can be accounted for in terrestrial sea water. These results, it was announced, make for “a serious mismatch.” All of a sudden, Earth was proclaimed “the odd planet out.”<sup>4</sup> Only Earth—dare we ask?

Most of these puzzles are eliminated once it is accepted that some members of the Solar System’s planetary retinue, including Earth, have actually been adopted. Not that the idea of such an adoption has never occurred to astronomers. Although he himself did not believe it, Stuart Clark did feel inclined to mention it. “Look around our solar system,” he wrote, “and you could be forgiven for thinking its eight planets drifted in from completely different parts of the cosmos.”<sup>5</sup>

The possibility of interlopers into the Solar System is nothing new in astronomical speculation. As with other objects discussed above, the chemical makeup of Comet Machholz 1 did not conform to expectations. It was found to be deficient in cyanogen. This led to three different possibilities. The comet could have formed in an extremely cold region far out in the Solar System, although no one seems to know why cold temperature would have done away with most of the cyanogen. The second possibility was exactly opposite to the first, in which the comet would have approached so close to the Sun that its infernal heat would have removed most of the comet’s cyanogen. Heat—cold—go figure. As far as David Schleicher, who then hailed from the Lowell Observatory, was concerned, however, the best solution would be in keeping with the comet’s infiltration of our Sun’s domain. “An extrasolar origin makes it easy to explain the composition,” he reported, especially since this would be in keeping with the expectation that, if such was the case, everything about the comet would be different. To Schleicher, the depletion of cyanogen “sounds” as if the comet “came from somewhere else.”<sup>6</sup> As always, needless to say, not everyone agrees and, as others have opined, much more evidence is needed before the alien origin of Machholz 1 can be verified.<sup>7</sup> But if the infiltration of galactic comets into the Solar System is thought to be possible, what is so bizarre about an errant planet doing exactly that? After all, judging by all that’s come to light in recent years, there are many more planets wandering freely through interstellar space than errant comets.

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<sup>1</sup> “Comet Dust Reveals Unexpected Mixing of Solar System,” *spacedaily.com* (September 19, 2008).

<sup>2</sup> *Ibid.*, p. 2.

<sup>3</sup> *Ibid.*, p. 1.

<sup>4</sup> K. Beatty, “Genesis Finding: Earth Has a Problem,” *Sky & Telescope News Blog* (October 16, 2008).

<sup>5</sup> S. Clark, “Unknown Earth: Our Planet’s Seven Biggest Mysteries,” *New Scientist* (September 27, 2008), p. 28.

<sup>6</sup> S. Battersby, “Has an Alien Comet Infiltrated the Solar System?” *newscientist.com* (December 3, 2008).

<sup>7</sup> *Ibid.*; see also *Lowell Observatory Press Release* (December 2, 2008).

When it comes to the main object of our unfolding scenario, it can safely be stated that, judging by what is being discovered about its varied satellites, the formation of the *present* Saturnian system has been raising many unanswered questions.<sup>1</sup> One disclosure that has been stressed more than once is the devolution of brown dwarfs into giant gaseous planets. This was again brought home to my attention while I was writing the present chapter through the discovery of such an object. Orbiting around the red dwarf star that had previously been dubbed Wolf 940 is a brown dwarf member of this class now named Wolf 940B. This dwarf is theorized “to have formed like a star,” but to have “ended up looking more like Jupiter.”<sup>2</sup> Although referred to as a “cool star” by stellar standards, it has a temperature of 300 degrees Celsius—572 degrees Fahrenheit—“which is almost hot enough to melt lead.”<sup>3</sup>

Speaking of Saturn itself, it has been found that the planet’s pattern of X-rays is entirely different from that of Jupiter while being very similar to that of the Sun itself.<sup>4</sup> Together with other inconsistencies, such as the concentration of heavy elements, this has led to the assumption that Saturn had to have formed through an entirely different process than Jupiter.<sup>5</sup> Despite all that, very much like Jupiter,<sup>6</sup> Saturn is now considered to be the remnant of a previous brown dwarf star,<sup>7</sup> just as we have been proposing these many years.<sup>8</sup>

### THE PLASMASPHERIC ENVELOPE

What has been described as a halo of hot gas around a Milky Way-like galaxy is actually a plasmaspheric envelope.<sup>9</sup> So, likewise, is the so-called “invisible atmosphere,” further defined as “a thin gas of electrically charged particles,” that envelopes the Milky Way itself.<sup>10</sup> Others have alluded to our Galaxy as being “immersed in a gigantic, near-invisible shell of matter, like a ship in a bottle.”<sup>11</sup> It all comes down to the same thing since plasmaspheric behavior remains something of a novelty to most writers.

Individual stars are also encased in plasmaspheres, although these, too, have been described in different terms. The one encasing the star known as HD 209458b has been said to be surrounded by “a huge, comet-like envelope.”<sup>12</sup>

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<sup>1</sup> See, for instance, “Cassini Tastes Organic Material at Saturn’s Geyser Moon,” *JPL.NASA.GOV: News Releases* (March 26, 2008), p. 1.

<sup>2</sup> A. Minard, “UK, US Astronomers: That’s One Cool Star,” *universetoday.com* (April 19, 2009), p. 2.

<sup>3</sup> *Ibid.*, p. 3.

<sup>4</sup> *New Scientist* (March 30, 2004), p. 19.

<sup>5</sup> J. Danneskiold, *Los Alamos News Letter* (August 16, 2004).

<sup>6</sup> R. Gore, “The Once and Future Universe,” *National Geographic* (June 1983), p. 717; C. Sagan, *Cosmos* (N. Y., 1980), p. 158; “Astronomers Find Jupiter-Like Weather on Brown Dwarfs,” *Science Daily [Internet] Magazine* (June 3, 2002).

<sup>7</sup> A. Boss, *Science* (June 20, 1997); M. Fox, “Rogue ‘Gal Balls’ in Space Break Rules of Solar System, Astronomers Find,” *The Vancouver Sun* (October 6, 2000), p. A13.

<sup>8</sup> See also our previous volumes on this subject.

<sup>9</sup> See here, D. E. Scott, *The Electric Sky* (Portland, Oregon, 2006), p. 81.

<sup>10</sup> *Ibid.*

<sup>11</sup> B. Berman, “Our Galactic Carousel,” *Discover* (September 2002), p. 31; but see also, *Scientific American* (January 2004), pp. 28-37.

<sup>12</sup> S. Seager, “Unveiling Distant Worlds,” *Sky & Telescope* (February 2006), p. 32.



It is unfortunate that plasma is often referred to by such confusing, even if colorful, terms, when not erroneously described as ionized gas. While there is no question concerning its ionization and its ability to conduct electricity, plasma is actually a state of matter beyond that of gases, liquids, or solids. More than anything else, however, plasma is an electromagnetic substance that can encase entire systems in globular and/or open-ended sheaths that become visible when in glow, or arc, mode.<sup>1</sup>

Usually referred to as the heliosphere, such a plasmasphere, centered on the Sun, envelops the entire Solar System within its folds. And while, as Donald Scott cautioned, magnetospheres should not be mistaken for plasmaspheres,<sup>2</sup> some planets, very much like Earth, happen to possess both.

By the year 2004, Earth's plasma sheet, as contained within the boundary of its plasmasphere, which has also been referred to as a "warm plasma cloak,"<sup>3</sup> was being discussed and diagrammatically presented in full color as if it had been an accepted tenet of astrophysics from day one.<sup>4</sup> By then, of course, Earth's plasmaspheric envelope had been photographed by special instruments aboard the IMAGE satellite.<sup>5</sup>

As we have proposed in previous works, the proto-Saturnian system had also been encased in its own plasmasphere.<sup>6</sup> And while mention was originally made of Earth's residence inside such a "spherical envelope,"<sup>7</sup> this was merely a generalization. As explained in much more detail in a following volume of this series, proto-Saturn's plasma sheath seems to have been of the open-ended type, in the shape of an hourglass, rather than a spherical bubble.<sup>8</sup>

Dramatic examples of such open-ended plasmaspheres constitute the Butterfly Nebula, the Ant Nebula, the Boomerang Nebula, Eta Carinae, and the aptly named Hourglass Nebula. It was, needless to say, while embedded in this plasmaspheric envelope that the proto-Saturnian system traveled through space toward its inevitable encounter with the Solar System.

## HELIOSPHERIC CONTACT

Beginning in the 1960s, chemical fingerprints of a supernova started to show up in meteorites.<sup>9</sup> Submicroscopic diamonds, which contained an exotic form of xenon, were also found in some of these fragments from space.<sup>10</sup> While—need I even say it?—these discoveries led to

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<sup>1</sup> See, *Primordial Star*, pp. 324 ff.

<sup>2</sup> D. E. Scott, *op. cit.*, p. 129.

<sup>3</sup> "Discovery of Warm Plasma Cloak Surrounding Earth, New Region of Magnetosphere," *sciencedaily.com* (December 14, 2008).

<sup>4</sup> J. L. Burch, "The Fury of Solar Storms," *The Secret Lives of Stars* (Scientific American Special Edition, 2004), p.. 45, 49.

<sup>5</sup> *Ibid.*, p. 49.

<sup>6</sup> *God Star*, pp. 297 ff.

<sup>7</sup> *Ibid.*, p. 299.

<sup>8</sup> *Primordial Star*, pp. 335-337.

<sup>9</sup> J. H. Reynolds, "Determination of the Age of the Elements," *Physical review Letters*, 4 (1960), pp. 8-10; M. W. Rowe & P. K. Kuroda, "Fissiogenic Xenon from the Pasamonte Meteorite," *Journal of Geophysical Research*, 70 (1965), pp. 709-714.

<sup>10</sup> M. D. Lemonick, "Supernova!" *TIME* (March 23, 1987), pp. 63-65.

various theories,<sup>1</sup> the highest probability indicated that such meteorites owed their birth to supernovae.<sup>2</sup> As we have seen, some were daring enough to claim from this that the Sun itself, and thus the Solar System, owes its origin to a supernova<sup>3</sup>—the Little Bang we have already touched upon. This was then collaborated by the detection of aluminum-26 in the Solar System, which radioisotope happens to be a predicted byproduct of supernovae.<sup>4</sup> Aluminum-26, however, has a half-life of a mere 720,000 years.<sup>5</sup> As has been noted, Earth is greatly older than that.<sup>6</sup> The best that could be mustered on the strength of this radioisotope is that a supernova could have gone off relatively nearby—between 60 and 130 light-years away—the effects of which would have caused mass extinctions both on land and in the oceans.<sup>7</sup> Even then, the event is calculated to have occurred around 2.8 million years ago.<sup>8</sup>

Submicroscopic diamonds have also been found in the Ice Age drift deposits of various countries. Since these were discovered in non-metamorphosed sediments, they could not have been produced by pressure and temperature in situ.<sup>9</sup> What has been deduced from this is that submicroscopic diamonds from past supernovae are a common constituent of interstellar dust, and that such dust is then swept up by planets and space debris.<sup>10</sup> There is much more to this and we'll return to it in a later chapter of this work. In the meantime, our own theory accounts for the above quite easily. While supernovae in the past might have blasted off in the far reaches of interstellar space, a much less massive outburst, but much nearer than light-years, actually took place above our ancestors' heads some 10,000 years ago when proto-Saturn's plasmasphere contacted the Sun's heliospheric sheath.

We will not here go into how it all came to pass since we described it all in detail in a previous volume of this work.<sup>11</sup> I will, however, remind the reader of Donald Scott's informative words when he spoke of bodies like proto-Saturn and the Sun possessing different inherent voltages.<sup>12</sup> When the plasmaspheres of such bodies contact each other, an electric current in

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<sup>1</sup> J. Berendt, "Diamonds Fall Out of the Sky in a Meteorite," *GEO* (October 1981), p. 137; C. Sagan, *Cosmos* (N. Y., 1983), p. 77; T. Palmer, *Catastrophism, Neocatastrophism and Evolution* (Nottingham, 1992), p. 63; *New Scientist* (November 4, 1995), p. 18;

<sup>2</sup> R. S. Lewis & E. Anders, "Interstellar Matter in Meteorites," *Scientific American* (August 1983), pp. 66-77; K. F. Weaver, "Meteorites—Invaders From Space," *National Geographic* (September 1986), p. 398; *The New York Times* (September 17, 1996); *Science Frontiers* (September/October 1995), p. 6.

<sup>3</sup> O. K. Manuel & D. D. Sabu, "Elemental and Isotopic Inhomogeneities in Noble Gases," *Transactions of the Missouri Academy of Science*, 9 (1975), pp. 104-122; *idem*, "Strange Xenon, Extinct Super-Heavy Elements, and the Solar Neutrino Puzzle," *Science*, 195 (1977), pp. 208-209; M. D. Lemonick, *loc. cit.*

<sup>4</sup> P. K. Kutoda & W. A. Myers, "Aluminum-26 in the early Solar System," *Journal of Radioanalytical and Nuclear Chemistry*, 211 (1997), pp. 539-555.

<sup>5</sup> M. A. Garlick, "The Supernova Menace," *Sky & Telescope* (March 2007), p. 28.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*, p. 29.

<sup>8</sup> *Ibid.*, p. 26.

<sup>9</sup> D. S. Allen & J. B. Delair, "Scientific Evidence for a Major World Catastrophe About 11,500 Years Ago: A Preliminary Selection," *Chronology & Catastrophism Review* XVII (1995), p. 45.

<sup>10</sup> P. Morledge, "Diamonds in the Rough," *Astronomy* (August 2002), pp. 24-26.

<sup>11</sup> *Flare Star, in toto.*

<sup>12</sup> *Ibid.*, p. 262.

the form of an arc discharge will fly between them to the detriment of the lower voltage body. In our case, the lower voltage body was our proto-Saturnian sun. As brown dwarf stars are known to do, our primordial luminary flared up in a blinding brilliance that went down in mythohistory as Day One.

The retraction of proto-Saturn's axial column was due to this very electric discharge as it drove back up into the orb that powered it like the electrical ram-rod it really was.

But could a minor body of proto-Saturn's mass shed a light akin to that of a more distant supernova? Why not? If, in its growth, a Jupiter-size planet, as per Douglas Lin, can go through a period in which "it can briefly outshine the sun,"<sup>1</sup> why not a brown dwarf star under plasmaspheric stress?

## THE FIAT LUX

Proto-Saturn's flare-up went down in history as the *fiat lux* of *Genesis*. As anyone familiar with the Old Testament knows, Elohim commenced his act of Creation by shedding a bright light.<sup>2</sup> El, who is Elohim's singular namesake, was not only lauded as the "the radiant god,"<sup>3</sup> sometimes rendered as "the God of glory,"<sup>4</sup> but as the very "source of light."<sup>5</sup>

Although we've been through most of this before,<sup>6</sup> it helps to briefly add to what we had presented, if for no other reason to remind us that the shedding of the light at the dawn of Creation is not, and never was, unique to the Old Testament.

The ancient Egyptians, too, were of the belief that light was "the first manifestation of the High God."<sup>7</sup> This very god, who had "created light," was said to have been Ra, and yet he also was Osiris.<sup>8</sup>

To the Hindus, as recounted in the *Laws of Manu*, the "divine self-existent" commenced Creation by dispelling the darkness, which he accomplished by shining forth "of his own free will."<sup>9</sup>

Although the Japanese version of this event is more convoluted than elsewhere described, mythologists have not failed to recognize its universal motif, as did Post Wheeler in the early 1950s. "In the earliest legend," Wheeler informs us, "one recognizes the primal myth" which he rightly recognizes as "the Kronos legend in its thousand forms, the father of all mythologies, upon which so many peoples have constructed their cosmogonies."<sup>10</sup> In this myth of myths, he could not fail to realize that the "creation of the light" and other acts of the Creator

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<sup>1</sup> D. N. C. Lin, "The Genesis of Planets," *Scientific American* (May 2008), p. 55.

<sup>2</sup> Genesis 1:3-4, where the name Elohim is usually supplanted by the word "God."

<sup>3</sup> J. Morgenstern, "The Divine Triad in Biblical Mythology," *Journal of Biblical Literature*, Vol. LXIV (1945), p. 23.

<sup>4</sup> Psalm 29:3 in King James version.

<sup>5</sup> J. Morgenstern, *loc. cit.*

<sup>6</sup> *Flare Star*, pp. 290 ff.

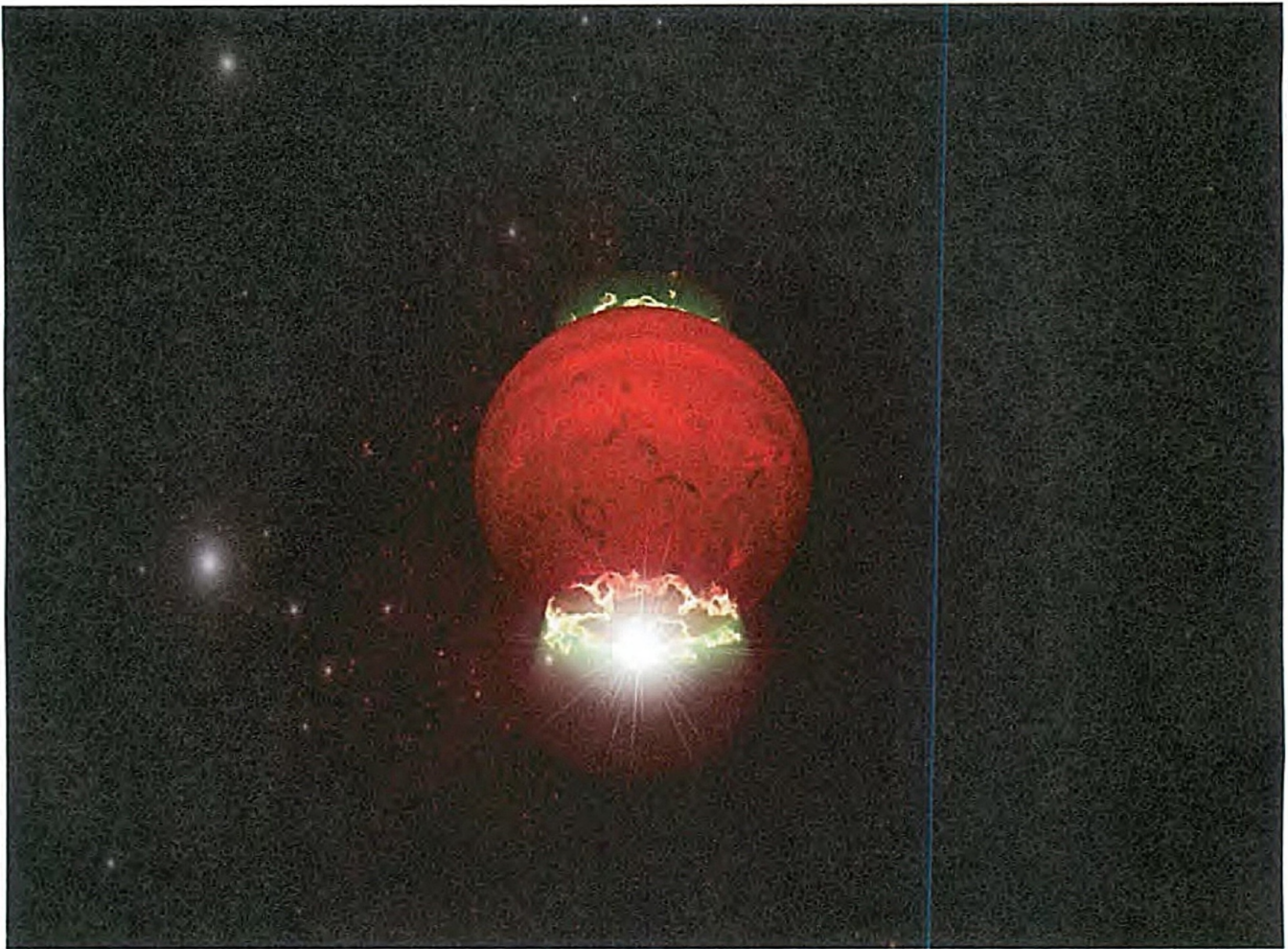
<sup>7</sup> R. T. R. Clark, *Myth and Symbol in Ancient Egypt* (London, 1978), p. 73.

<sup>8</sup> A. O. Bolshakov, *Man and His Double in Egyptian Ideology of the Old Kingdom* (Germany, 1997), p. 184.

<sup>9</sup> R. Van Over, *Sun Songs: Creation Myths from Around the World* (N. Y., 1980), p. 327.

<sup>10</sup> P. Wheeler, *The Sacred Scriptures of the Japanese* (N. Y., 1952), p. 389.





**Flaring brown dwarf star.**  
(Illustration courtesy of Hallinan, *et al.*, NRAO/AUI/NSF.)

“recall the story of the Hebrew Genesis.”<sup>1</sup>

The same motif springs up half a world away in what is often termed the New World. In the Mayan collection of sacred books known as the *Chilam Balam of Chumayel*, Creation is said to have commenced with *Chuen*, which is translatable as a “burning without flame.”<sup>2</sup> The very same idea of a “beginning” with a “burning without flame” is also found in the Nahua myth of Creation.<sup>3</sup> The source of this flame, or he who “emits light,” was known as Itzamna.<sup>4</sup> This deity has not only been found to correspond to the Egyptian Osiris,<sup>5</sup> but, as Ken Moss rightly deduced, is directly identifiable as the proto-Saturnian god of our discussion.<sup>6</sup> Quetzalcoatl, the Aztec version of the Mayan Kukulcan, whom we have already identified as another

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<sup>1</sup> *Ibid.*, p. 390.

<sup>2</sup> I. Nicholson, *Mexican and Central American Mythology* (London, 1967), p. 52.

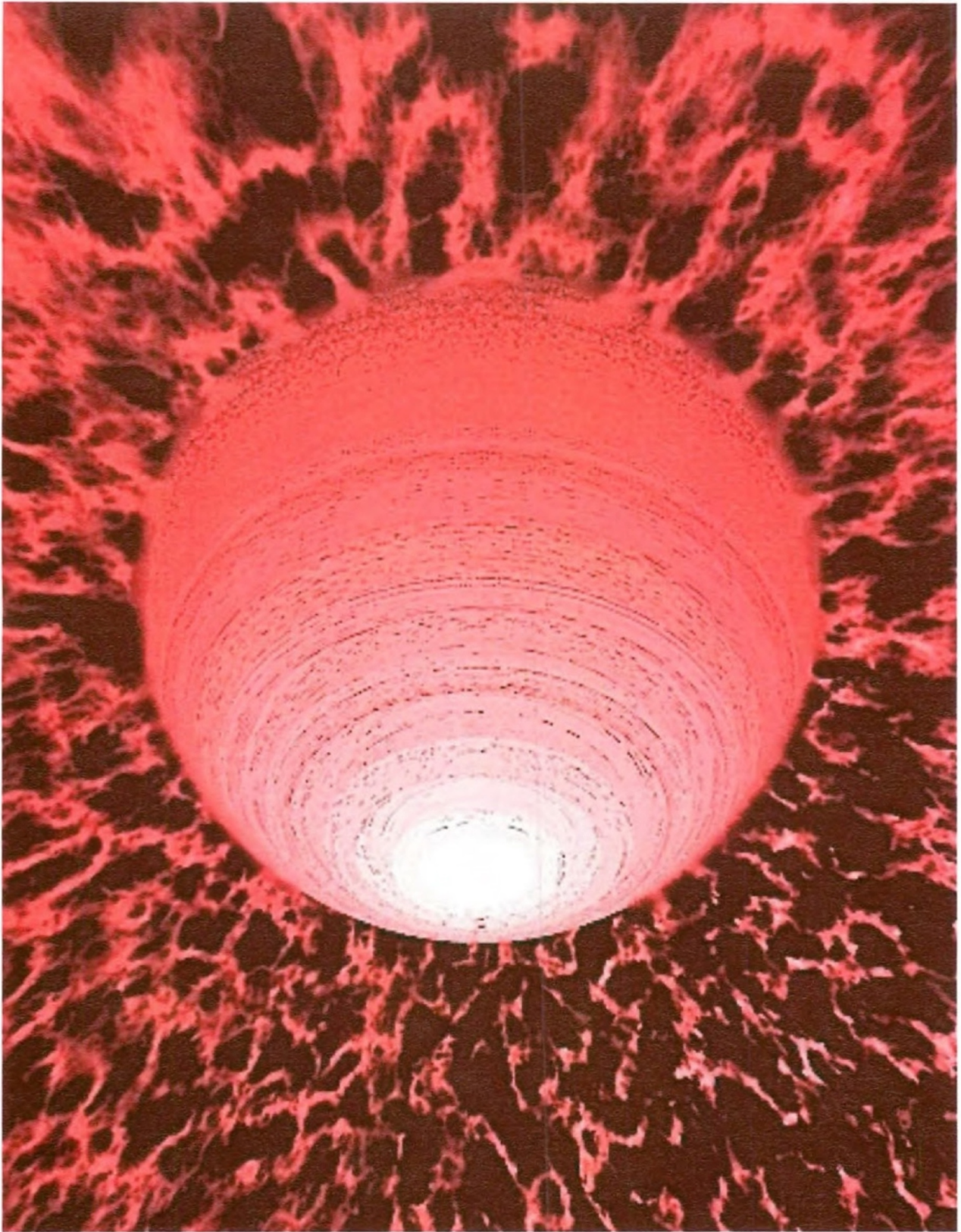
<sup>3</sup> *Ibid.*

<sup>4</sup> G. Annequin, *The Civilization of the Maya* (Geneva, 1978), p. 144.

<sup>5</sup> D. de Landa, *Yucatan: Before and After the Conquest* (N. Y., 1978), pp. 56, 143.

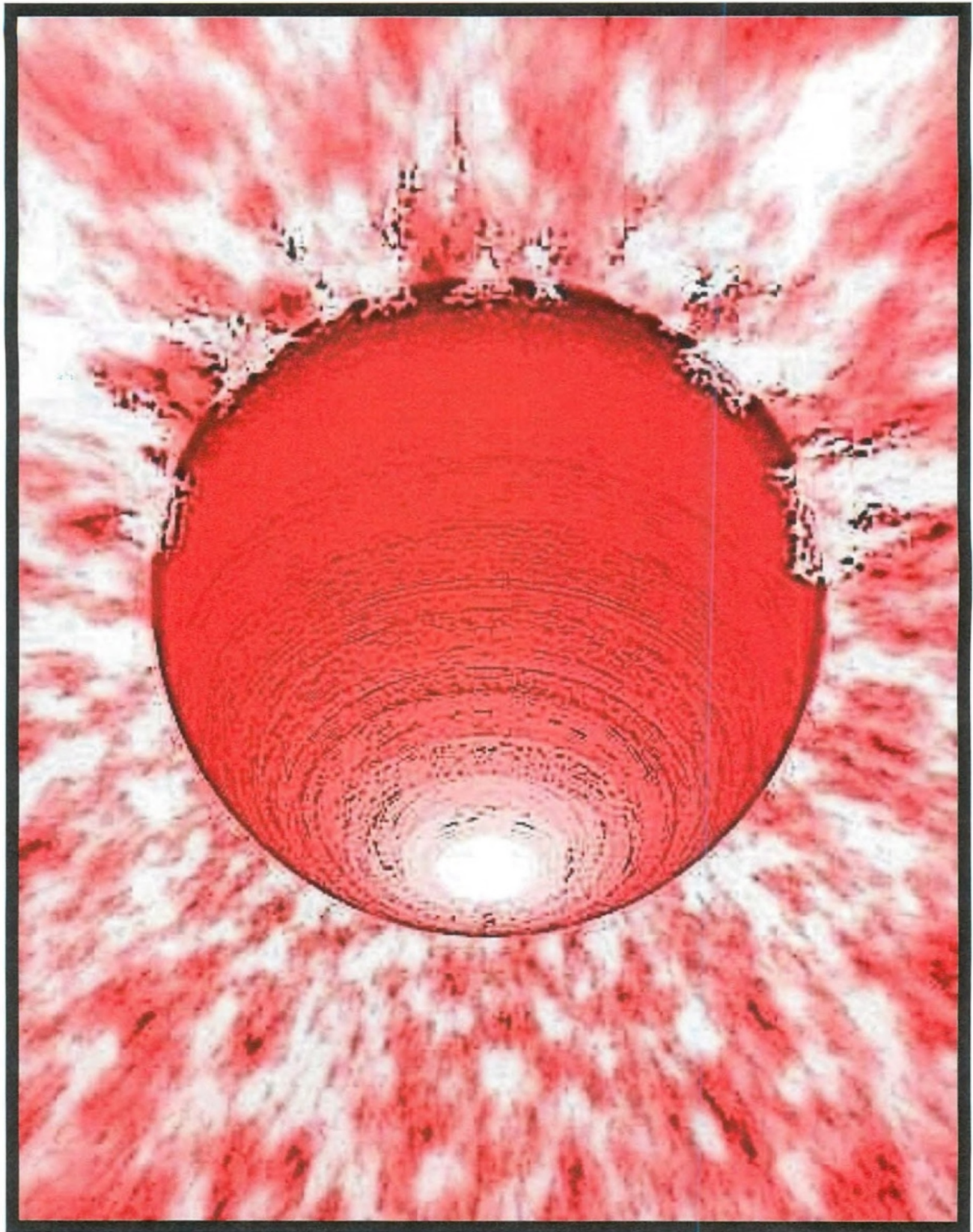
<sup>6</sup> K. Moss, “Maya Cosmos: A Saturnian Interpretation,” *AEON* VI:1 (February 2001), pp. 83 ff.





**Proto-Saturn's flare-up.**  
(Illustration by Richard M. Smith.)





A later stage of the flaring proto-Saturnian sun.  
(Illustration by Richard M. Smith.)



Saturnian god,<sup>1</sup> was also said to have shed, or to have appeared as, the first light in the world, the very light which announced the beginning of Creation.<sup>2</sup> In the Mayan *Popul Vuh*, it is the same Quetzal Serpent who is associated with the very “invention of light and life.”<sup>3</sup>

The Aborigines of Australia’s Kimberley region told of the event in their own inimitable way. To them, the deity called the Supreme One, or the Above-One, whom they also referred to as the One Beyond Our Understanding, was named Ngadjar. It was at what these people refer to as the “making,” that is “Creation,” that Ngadjar “put his own light there.” It was he who “had brought light.”<sup>4</sup>

## INUNDATION

We will not go into all that came to pass on Earth as a result of proto-Saturn’s flare-up, since we have devoted the better part of a previous volume to that very subject.<sup>5</sup> Nevertheless, since the writing of that volume, certain issues have come to our attention which continue to add evidence in favor of our theory. Some of them have to do with the heat that would have been released during the event under discussion.

What has so far been considered the oldest human skeleton to be discovered in the Americas was found in an underwater cave near Tulum in Mexico’s Yucatan Peninsula. Dubbed Eva de Naharon, the remains are said to be 13,600 years old. Four other skeletons were found in nearby caves, three of which range in age from 11,000 to 14,000 years ago, but, because of her older age, Eva has been culling most of the fame. The other skeleton had not yet been dated at the time of this writing. As for their identity, it is still not known where these people could have come from, but the discovery of their skeletons has wreaked havoc with existing theories of the peopling of America. Judging by the shape of the skeletons’ skulls, it is doubtful that their owners were of north Asian descent. The probability is that they came from *southern* Asia and, if that is the case, they would not have crossed into America via the much-touted, and now submerged, land-bridge spanning the Bering Strait.<sup>6</sup>

As a caveat, we must point out that all dates have been derived through the radiocarbon dating method which, despite attempts to calibrate it through other schemes, remains quite erratic, especially in this particular case where the bones were recovered some 50 feet below sea level. As was brought to the attention of those involved, minerals in sea water are known to alter the carbon-14 content of just such submerged bones.<sup>7</sup>

There are, however, other indications that the dates might not be far off the mark. For one thing, if Eva de Naharon’s age is even *close* to being correct, she would have lived at a time

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<sup>1</sup> *God Star*, pp. 312 ff.

<sup>2</sup> E. Keber, *Codex Telleriano Remensis* (Audtin, 1995), pp. 175, 262.

<sup>3</sup> M. Edmonson, *The Book of Council: The Popul Vuh* (New Orleans, 1971), p. 12.

<sup>4</sup> D. Mowaljarlai & J. Malnic, *Yorro Yorro: Everything Standing Up Alive—Spirit of the Kimberley* (Broome, Australia, 2001), p. 221.

<sup>5</sup> *Flare Star*, pp. 345 ff.

<sup>6</sup> E. Barclay, “Oldest Skeleton in Americas Found in Underwater Cave?” *nationalgeographic.com/news* (September 3, 2008).

<sup>7</sup> *Ibid.*



Kukulcan, the Mayan equivalent of the Aztec Quetzalcoatl, the initiator of heavenly light.  
Stone carving—Xcaret Eco-Archaeological Park—Costa Maya—Mexico.  
(Photograph by the author.)

when sea levels were some 200 feet lower. This makes sense because it was after that time that the Ice Age glaciers are believed to have melted, “causing sea levels to rise hundreds of feet,” which would have submerged the caves in which the skeletons were discovered. The correctness of this supposition is supported by the additional fact that the remains of elephants, giant sloths, “and other ancient fauna” known to have existed during the Ice Age were also found in these underwater caves.<sup>1</sup> Nor was this the first or only case. Mammoth bones have long been retrieved from the bottom of the Aucilla River in northern Florida, which river is known to have been deepened by the same rise in sea level that drowned the Mexican caves.<sup>2</sup>

That Scandinavia suffered a series of immense earthquakes 10,000 years ago was reported in 2004.<sup>3</sup> So, also, with evidence of catastrophic floods around the same time which, in Great Britain, washed Pleistocene bison and deer out of existence, the bones of which have been re-

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<sup>1</sup> *Ibid.*

<sup>2</sup> W. Chorlton, *Ice Ages* (Alexandria, 1983), pp. 68-69.

<sup>3</sup> *New Scientist* (August 14, 2004), p. 13.



trieved from a cave into which they have been rammed.<sup>1</sup> These colossal floods have also been blamed on the “rapid ice sheet melting” which Brian Hills dates to the same benchmark date of 10,000 years ago.<sup>2</sup>

The amount of land that was submerged due to the melting of the Pleistocene ice was immense. As documented by Cesare Emiliani, the extent boggles the imagination. Before the melt-down, the Bering Strait was a land bridge that joined Alaska to Siberia; the Grand Bahama Banks was a 120-meter-high plateau; most of the remote islands of the Pacific were integrated into larger archipelagos; England and France were joined together; the Persian Gulf was dry; India was joined to Sri Lanka, with its coastlines much more extensive; the Maldive Islands had a greater surface above water; Malaysia, Indonesia and the Philippines were surrounded by an immense plain now referred to as Sunda Land; the three main islands of Japan formed a single land mass; and, farther south, Australia, Tasmania, and New Guinea formed a single continent which geologists refer to as Sahul.<sup>3</sup>

As we have shown in detail, the relatively sudden melting of the Ice Age glaciers was caused by the direct heat released from proto-Saturn’s flare-up,<sup>4</sup> plus the frictional heat derived from the terrestrial braking that accompanied it.<sup>5</sup>

Since, very much like the carbon-14 dating method, ice core data remains fraught with inconsistencies, we do not accept the Danish-derived so-called authoritative date of the end of the Ice Age which has been given as *exactly* 11,711 years ago.<sup>6</sup> Given the changes in chemical reactions that can be produced in various substances due to the emissions of stellar flares, whether near or far, no dating scheme can be that accurate. As with other dating methods, however, we do accept approximated calculations and intelligent generalities.

It is therefore unfortunate that, in analyzing the ice core evidence, researchers at the Niels Bohr Institute at the University of Copenhagen have ended up with ambiguity in their conclusion. On the one hand they have stated that it took “a long process over several thousand years to warm up the earth and melt the kilometer thick ice caps that covered large parts of the northern hemisphere.”<sup>7</sup> On the other, they have verified what others had been claiming on the strength of different evidence, namely that the dramatic climate change at the end of the Ice Age was abrupt.<sup>8</sup> As Jørgen Peder Steffensen explained: “Our new, extremely detailed data from the examination of the ice cores shows that in the transition from the ice age to our current warm interglacial period the climate shift [was] so sudden that it is [as] if a button [had been] pressed.”<sup>9</sup>

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<sup>1</sup> *The Scotsman* (March 19, 2004), as cited by D. Salkeld, *et al.*, in the “Monitor” section, *Chronology & Catastrophism Workshop* (2005:1), p. 18.

<sup>2</sup> B. Hills, *Origins: Cosmology, Evolution & Creation* (Cambridge, 2003), p. 166.

<sup>3</sup> C. Emiliani, *Planet Earth* (N. Y., 1992), p. 543.

<sup>4</sup> See *Flare Star*, pp. 370 ff.

<sup>5</sup> *Ibid.*, pp. 372 ff.

<sup>6</sup> “‘The Modern Age’ is Defined by Danish Ice Core Research,” Niels Bohr Institute news release at [nbi.ku.dk/English/news](http://nbi.ku.dk/English/news) (December 10, 2008).

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*



An earlier extinction—a relatively minor one—also took place in the Pliocene epoch, dated at 13 million years ago, which some have blamed on a supernova. This was surmised through levels of radioactive iron that have been discovered in sea floor sediments, which led to the supposition that the emission from the stellar blast could have weakened Earth's atmosphere and thus exposed organisms to lethal levels of ultraviolet radiation.<sup>1</sup>

A similar supernova has also been blamed for the major extinction of the Ordovician period, dated at c. 500 million years ago, in which half of all marine species were wiped out.<sup>2</sup>

Given the astronomical distances of such stellar blasts, and knowing what we now do, it is much more probable that these extinction events were due to earlier discharges by the proto-Saturnian sun.

Back to the Pleistocene Ice Age with which we are presently more concerned, it continues to mystify scientists that “the main wave of extinction occurred not when the ice sheets reached their greatest extent, but after they had begun to retreat.”<sup>3</sup> In other words, much as we have been claiming, the extinction of Pleistocene fauna took place right after and due to proto-Saturn's flare-up.

### THE GREENING OF THE LAND

The melting of Ice Age glaciers, however, was not the only result of proto-Saturn's heat wave. Such sudden heat would have accelerated evaporation from Earth's oceans. A prolonged series of increased rainfalls would have followed. Previous arid areas would have turned into lush pastures. Such was the case with the Sahara. At about the time of our benchmark figure, 10,000 years ago, new rains started falling in a previously arid area of North Africa that was close in size to the United States. Verdant watersheds suddenly stretched across the entire Sahara from Egypt to Mauritania.<sup>4</sup>

Among other factors, this change of climate is believed to have been caused by a wobble in Earth's axis, which changed Africa's seasonal monsoons,<sup>5</sup> and which, as I aim to show in a forthcoming volume, was also due to proto-Saturn's explosive discharge.

Some of the people who settled in this newly nurtured grassland in what is now Gobero, in northern Niger, are archaeologically known as the Kiffian. Judging by their remains—skeletons and artefacts—they lived mostly through fishing “during the earliest wet period, between 10,000 and 8,000 years ago.”<sup>6</sup> In keeping with other evidence which indicate that humans lost much of their physical robustness in post Ice Age times,<sup>7</sup> skeletons in Kiffian burials show that “some of these individuals were surprisingly large—as much as six feet eight inches tall, with thick bones suggesting they had been well muscled.”<sup>8</sup> A change in Earth's mass, which subject we must also reserve for a future volume, had been responsible for this.

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<sup>1</sup> *New Scientist* (November 3, 2007), p. 19.

<sup>2</sup> P. Plait, “Death from the Skies,” *Sky & Telescope* (June 2006), p. Primordial *Star*, pp. 227, 232-234, 237

<sup>3</sup> W. Churlton, *loc. cit.*, p. 60.

<sup>4</sup> P. Gwin, “Lost Tribes of the Green Sahara,” *National Geographic* (September 2008), p. 129.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*, p. 132.

<sup>7</sup> *Primordial Star*, pp. 128 ff.

<sup>8</sup> P. Gwin, *op. cit.*, p. 133.

It lasted some 5,000 years, which brings us to our second benchmark figure. Around 6,500 years ago, a more lightly-built people, now known as the Tenerian, began to inhabit the same Gobero region.<sup>1</sup> By then the area had grown much drier,<sup>2</sup> but since animals began to be drawn to the ever-diminishing lakes, they were easier to hunt.<sup>3</sup> Keeping in mind that these are but round numbers, we find that somewhere between 4,500 and 3,500 years ago, the present desert claimed the green Sahara and the people left the area.<sup>4</sup>

So, likewise, in that strip of land through which the Great Rift Valley runs, separating Israel from Jordan. Although what used to be Lake Lisan, which stretched along the Rift south of the present Sea of Galilee, had ran dry during the Pleistocene, great downpours of rain around 10,000 years ago refilled the depression that became the Dead Sea.<sup>5</sup>

## FIRST INTERLUDE

At this point, with so much covered in our first three volumes of this series, we think it best to relate briefly what we have so far uncovered in order not to have what follows appear to be hanging in mid air. To that end, *with but slight modifications and some additions*, we present the set of theses delineating our reconstruction of Earth's past cosmic history with which we ended our second volume.

Hypothesis #1: That the present giant gas planet we know by the name of Saturn had previously been a sub-brown dwarf star free floating in space outside the demarcation of the present Solar System

Hypothesis #2: That Earth was at that time a satellite of this proto-Saturnian sub-star which, because of its proximity, loomed large in the sky as a distinct disk larger than the present apparent size of the full Moon

Hypothesis #3: That, during this period, a nebulous entity, which we have conjectured to have been a circumstellar disk, surrounded the proto-Saturnian primary in its equatorial plane. This nebulous cloud seems to have been what our ancient forefathers *inter alia* alluded to as Chaos.

Hypothesis #4: During this same period, the proto-Saturnian orb was described as having floated over an apparition which looked like an auroral sheet of eddying celestial water, a cosmic whirlpool of an ocean, which we conjecture to have been the same circumstellar disk.

Hypothesis #5: That this proto-Saturnian assemblage was the first, and for a time, the only visible celestial entity that could be seen in Earth's primordial sky.

Hypothesis #6: That, as seen from Earth, the proto-Saturnian primary did not rise or set, but remained visibly immobile at all times.

Hypothesis #7: That proto-Saturn's immobility was due to the fact that Earth was

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<sup>1</sup> *Ibid.*, p. 137.

<sup>2</sup> *Ibid.*, p. 139.

<sup>3</sup> *Ibid.*, p. 142.

<sup>4</sup> *Ibid.*, pp. 131, 142.

<sup>5</sup> D. Neev & K. O. Emery, "The Dead Sea: Depositional Processes and Environments of Evaporates," *Geological Survey of Israel Bulletin*, 41 (1967), p. 147; *idem.*, "Geophysical Investigations in the Dead Sea." *Sedimentary Geology*, 23 (1979), pp. 209-238.

stationed directly “beneath” proto-Saturn’s south pole and that, from Earth, proto-Saturn would have appeared to be permanently fixed in the north celestial sphere, the very place which is now occupied by the far more distant Pole Star. What this also means is that Earth and proto-Saturn were linearly aligned with both of them sharing the same axis of rotation.

Hypothesis #8: That what appeared to be a slow-twirling narrow beam of tapering light connected the proto-Saturnian orb to Earth’s north polar region. This ray from above was a sustained plasma discharge in the form of Birkeland current, a scaled-down version, or the slowly deteriorating remnant, of a so-called plasma “jet,” many of which are presently observed streaming from galactic and stellar objects, and as in fact have been detected emanating from brown dwarf stars.

Hypothesis #9: That Earth was originally engulfed in what our ancestors persistently referred to as darkness. This was an age which, despite its remoteness, ended up etching itself indelibly in human consciousness. It was an era during which the Sun, the Moon, and the stars were not yet visible in the sky. Proto-Saturn ruled alone. That this darkness was not total was also told by ancient man who well remembered the feeble light that proto-Saturn shed on Earth.

Hypothesis #10: That this system was embedded in a plasmasphere that was centered on proto-Saturn, the near opacity of which enabled proto-Saturn’s radiation to be reflected to all terrestrial latitudes.

Hypothesis #11: That proto-Saturn’s illumination, relatively feeble as it was, together with the plasmasphere’s near opacity, were the means by which the stars were kept from visibility. The Sun, on the other hand, was still too far to be seen, while the Moon had not yet been captured.

Hypothesis #12: That Earth would have received enough heat to sustain life, which heat would have radiated directly from proto-Saturn’s close proximity above Earth’s northern hemisphere. The southern latitudes would also have received sufficient warmth, *even if a feebler light*, from the radiation that would have been reflected off the inner surface of proto-Saturn’s plasmasphere within which Earth would have been enveloped. In the northern hemisphere, this indirect radiation would have added to the direct heat and light received from above Earth’s northern pole. Thus, during this time, Earth’s climatic environment would have been one without seasonal change, luxuriating in one single season of eternal spring, even though there would have been slightly different latitudinal temperatures. Tropical and/or sub-tropical flora and fauna were thus able to thrive in Earth’s northern region, even within the present Arctic Circle, and the possibility exists that this flora and fauna originated in these very regions before migrating to more southerly latitudes.

Hypothesis #13: That the much more energetic dust-laden formations of what have now turned into auroral ovals were responsible for casting ribbons of lands, south of the Arctic and north of Antarctica, into perpetually colder climates which, through the ages, resulted in the miles-deep glaciation that account for Earth’s series of ice ages.<sup>1</sup>

Hypothesis #14: That, due to proto-Saturn’s immobility, and the absence of the Sun, ancient man had nothing at his disposal by which he could calculate the passage of time.

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<sup>1</sup> *Primordial Star*, pp. 260 ff.



Hypothesis #15: That, as the proto-Saturnian system drew closer to the present Sun's domain of influence, their plasmaspheres came in contact with each other, electrical potentials clashed, and cosmic sparks began to fly.

Hypothesis #16: That the first sign of this plasmaspheric contact was the electrical imbalance suffered by the jet-like Birkeland column which joined proto-Saturn to Earth, which jet then underwent a series of visible instabilities the likes of which mankind had never seen and which he commenced to reproduce in his sacred art down through the ages.

Hypothesis #17: That, following this series of awe-inspiring volatilities, the jet was seen to retract itself and disappear within the very proto-Saturnian orb that had originally spewed it forth.

Hypothesis # 18: That, due to the disproportionate electrical energy between proto-Saturn and the Sun, the former flared up in a glorious burst of light that dispelled the gloom, an event that went down in the mytho-history of mankind as Day One.<sup>1</sup>

Hypothesis #19: That immediately upon and due to proto-Saturn's flare-up, Earth and its inhabitants were subjected to an appalling heat wave while being engulfed in a tremendous sheet of cosmic radiation, including X-rays and other potentially harmful beams and particles.

Hypothesis #20: That the proto-Saturnian system's encounter with the Sun resulted in the reversal of Earth's magnetic field—or, more correctly, its dipole—which was the combined reaction of the Sun's super-flare-like discharge together with proto-Saturn's own flare. This culminated in a boost of the terrestrial field which would then have commenced to decay once more in its attempt to adjust to the Sun's own field of influence.

Hypothesis #21: That, very much like the Sun achieves at present through its flares on a much smaller scale, proto-Saturn's flare-up braked Earth's rotational speed, with its former rate resuming not long after.

Hypothesis #22: That this temporary braking effect resulted in the oceans' incursion over large areas of the land as well as additional heat due to the friction between Earth's crustal layers which also caused tremendous tectonic activity including global volcanism, earthquakes, landslides, and various other upheavals.

Hypothesis #23: That the calamities incurred by Earth throughout these events were responsible for great loss of life among both beasts and the human species. Vast hordes of animals which existed during the Ice Age were completely exterminated, never again to grace the land or the oceans they once inhabited.

Hypothesis #24: That the cosmic radiation released by proto-Saturn's flare-up would have also resulted in the birth of mutated offspring both among animals and humankind, but that, with some possible exceptions, including racial diversions among humans, these mutations were not passed on to following generations.

Hypothesis #25: That, due to the ensuing heat wave, the glaciers of the Pleistocene Ice Age commenced to melt, thus raising oceanic levels all over the world, while causing further floods and mud slides. Previous glaciated areas were thus reclaimed and, in time, the greening of these regions added tremendously to the habitability of Earth's northern hemisphere.

Hypothesis #26: That, following its flare-up, proto-Saturn continued to shine much

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<sup>1</sup> Genesis 1:5.

brighter than it had previously done, bright enough for ancient man to have persistently alluded to it as a sun.

Hypothesis #27: That, at a later period, this primordial proto-Saturnian sun continued to shine during that time we presently allude to as night.

Hypothesis #28: That, while the proto-Saturnian congregation was moving deeper into the Solar System, its plasmasphere changed its electromagnetic character, thus robbing it of its former near opacity. It was during this protracted time that ancient man was finally able to catch a glimpse of the slowly approaching Sun which, at first, appeared no bigger than a star.

# PART TWO



# Chapter 6

## BLOW OUTS

### ORDER OUT OF CHAOS

The upheavals that Earth went through at the termination of the Ice Age, as described in detail in one of our previous volumes,<sup>1</sup> were not the only drastic events brought about through proto-Saturn's flare-up. Such a colossal outburst would hardly have left Earth's primordial sub-brown dwarf star itself unscathed. It would be safe to assume that some of those who survived the cataclysm would have been blinded by the light. But those who did not look directly at the blow-out would have escaped with sight intact. Their first thoughts, needless to say, would have centered around their own protection. They would have sought safety wherever they could. We shall never know what they went through. In time, however, they would have begun to notice the severe changes that were unfolding in the sky. Not that anything would have been able to be seen while the light lasted. But the brilliance in the sky would eventually have started to subside and the proto-Saturnian star would have then been caught in the act of undergoing drastic changes.

To begin with, proto-Saturn's circumstellar disk could not have entirely survived the outburst. Despite the probability of its magnetic bonding, its nebulous nature would not have been able to withstand the power of its host's electric discharge. That it unraveled there seems to be no question. But since we know that disks reform when stars erupt as novae, can we be sure that proto-Saturn's disk did not reconstitute itself? Or, better still, can we be positively certain that, while unraveling, it did not entirely disperse? Whatever did transpire should have been noted by the survivors and passed on to newer generations. What does the record state?

Because of its nebulous nature, ancient man described proto-Saturn's circumstellar disk as an entity that defied definition. Its undefined matter was nonetheless compared to various earthly substances that bore some semblance to the slowly spinning disk suspended in the sky above. Without even knowing what they were alluding to, and taking their cue from classical Greek translators, mythologists have often referred to this mysterious nebula as "chaos."<sup>2</sup> As the ancestors of the Hawaiians, among others, well remembered, "all things" have their source in chaos.<sup>3</sup> And yet they also knew that this chaos was "the wreck and ruin of an earlier world."<sup>4</sup> This chaos is then said to have turned into "cosmos,"<sup>5</sup> a word that is best translatable as "order."

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<sup>1</sup> *Flare Star*, pp. 345 ff.

<sup>2</sup> See here, *God Star*, pp. 261 ff.; *Flare Star*, pp. 217-219.

<sup>3</sup> R. B. Dixon, *Oceanic Mythology*, Vol. 9 of *Mythology of All Races* (N. Y., 1916), p. 15.

<sup>4</sup> *Ibid.*

<sup>5</sup> M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 405.

## THE VOIDING OF THE WATER

As additionally noted, the same circumstellar disk was also visualized by ancient man as a whirling celestial sea.<sup>1</sup> This is brought out in a Hebrew psalm in which Yahweh is asked to be praised by the “waters that are above the heavens.”<sup>2</sup> Few commentators have ever wondered what made these ancient people believe in a stretch of water that existed in the sky. They have been merely satisfied with the realization that these are the same waters that constituted the so-called “deep” upon which the *ruach* of Elohim was said to have moved prior to Creation.<sup>3</sup> What is curious is that, many years later, the Hebrew prophet Isaiah referred to these waters as having dried up. “Art thou not it which had dried the sea?” he is said to have asked Yahweh, which sea he then defined as “the waters of the great deep.”<sup>4</sup> Or, for want of a better translation: “Art thou not the one that dried up *yam* [that is, the sea], the waters of the great *tehom*?”

This drying of the sea is not unique to Hebrew lore. It is also found in Buddhist teaching. Rather than having happened in the past, it is there presented as one of the signs accompanying the eventual destruction of the world. This is the nature of apocalyptic belief which reflects man’s obsession with the end of time during which the cataclysms of the past will be bound to repeat themselves. Thus it is said that when “this world will be destroyed...the mighty ocean will dry up.”<sup>5</sup> That this ocean is the celestial one of our concern is evidenced by the nature of its allied destruction which is believed to encompass the “Brahma-world.”<sup>6</sup> Since Brahma has been identified as the main deity of our discourse, the Brahma-world is here understood as the Saturnian sphere of influence.

In the Babylonian *Enuma Elish*, the primordial ocean that existed before Creation is named Apsu<sup>7</sup> (sometimes rendered Abzu, but also Zuab). This name was probably the origin of the Greek *abyssos* (Latin *abyssus*) from which the English word “abyss” is derived.<sup>8</sup> This mytho-historical abyss is also termed “the deep,”<sup>9</sup> which is the same primordial ocean referred to in the Book of *Genesis*.<sup>10</sup> The Hebrew term which is there translated “deep” is *tehom*, which word really connotes “a surging mass of water.”<sup>11</sup> It is therefore not surprising that the Babylonian Ea, whom we have already identified as proto-Saturn, was also called Shar Apsi, “King of the Watery Deep.”<sup>12</sup> Because of its English meaning, it is unfortunate that most

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<sup>1</sup> *God Star*, pp. 268 ff.; *Flare Star*, pp. 219 ff.

<sup>2</sup> Psalm 148: 4.

<sup>3</sup> Genesis 1: 2.

<sup>4</sup> Isaiah 51: 10.

<sup>5</sup> H. C. Warren, *Buddhism in Translation* (Cambridge, Mass., 1896), p. 322.

<sup>6</sup> *Ibid.*

<sup>7</sup> A. Heidel, *The Babylonian Genesis* (Chicago, 1942), p. 10; see also M. Vieyra, “Empires of the Ancient Near East: The Hymns of Creation,” *Larousse World Mythology* (London, 1972), p. 65.

<sup>8</sup> See also *God Star*, pp. 266-267, 269, 449; *Flare Star*, pp. 219-220, 302.

<sup>9</sup> G. Michanowsky, *The Once and Future Star* (N. Y. 1977), p. 49.

<sup>10</sup> Genesis 1: 2.

<sup>11</sup> J. Strong, *Hebrew and Chaldee Dictionary* (Madison, N. J., 1890), p. 123.

<sup>12</sup> D. A. Mackenzie, *Myths of Babylonia and Assyria* (London, 1915), republished as *Mythology of the Babylonian People* (London, 1996), pp. 28-29.

translators have understood this deep to refer to an underground source,<sup>1</sup> when its relation to Ea/Saturn should have been enough to reveal its celestial setting. And it was that very Ea who lulled Apsu into slumber during which he slew him.<sup>2</sup> It can thus be seen that the Babylonians remained cognizant of the fact that it was Saturn himself who was responsible for the suppression of the circumstellar disk, the celestial sea of their forefathers. As they also well remembered, this was an act that led to radical repercussions. This Babylonian suppression, however, must not be understood as an eradication. Although the circumstellar disk did fall apart, something of it seems to have survived.

The ancients were not the only ones who felt confused when it came to describing proto-Saturn's circumstellar disk. Modern mythologists, too, have been at a loss in attempting to understand what our forefathers were alluding to. Given the disk's nebulousity, to say nothing of the difficulty it presented in being compared to earthly substances, the vagueness of its various descriptions is understandable. What then worsened this confusion was the uncertainty attached to its transformation following its primary's flare-up. This uncertainty was further crystallized when the telling of the event was frozen into writing, when the written words lost their exact meaning, when these meanings were allowed to be debated, and translations from one language to another introduced too many ambiguities. Needless to say, this transpired in the telling of other events. I shall not, however, bore the reader with a list of such regrettable examples. The translation of *tehom* as "deep," mentioned above, is one such instance. Another is the following:

The Saturnian identity of Varuna need not be re-stressed.<sup>3</sup> Now it is said that Brahma, who was also Saturn, crowned Varuna, that is himself, "as the lord of the waters."<sup>4</sup> More than that, the *Rig Veda* directly lauds Varuna as he who is "an ocean far removed" with worship ascending to him through heaven.<sup>5</sup> One would think this "ocean far removed" would have been an ocean up in heaven "far removed" from Earth. Others have however understood this term to mean "hidden," and thus referring to Varuna "who is himself called 'the hidden ocean'."<sup>6</sup> So, similarly, with another passage from the same *Rig Veda* which has been translated as "Varuna hath o'erspread the mighty sea of air,"<sup>7</sup> but which others have rendered as "Great Varuna has hidden the ocean,"<sup>8</sup> or "Great Varuna has hidden the sea."<sup>9</sup>

On Earth's opposite hemisphere, the Maya, too, told something similar. "Thus let it be done," was their gods' fiat of Creation. "Let the water recede and make a void."<sup>10</sup> Receding

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<sup>1</sup> *Ibid.*, p. 29.

<sup>2</sup> C. H. Gordon & G. A. Rendsburg, *The Bible and the Ancient Near East* (N. Y., 1997), p. 42.

<sup>3</sup> *God Star*, pp. 167-169, 269, 310; *Flare Star*, p. 306.

<sup>4</sup> *Linga Purana* LVIII: 3.

<sup>5</sup> *Rig Veda* VIII:41:8, as translated by R. T. H. Griffith, *Hinduism: The Rig Veda*, Volume 5 of J. Pelikan (ed.), *Sacred Writings*, p. 428.

<sup>6</sup> G. de Santillana & H. von Dechend, *Hamlet's Mill: An Essay on Myth and the Frame of Time* (Boston, 1969), p. 265.

<sup>7</sup> *Rig Veda* IX:73:3, as translated by R. T. H. Griffith, *op. cit.*, p. 501.

<sup>8</sup> G. de Santillana & H. von Dechend, *op. cit.*, p. 263.

<sup>9</sup> M. Eliade, *op. cit.*, p. 429.

<sup>10</sup> D. Goetz & S. G. Morley, *The Book of the People: Popul Vuh* (Los Angeles, 1954), p. 4.



waters do not connote their disappearance. If the circumstellar disk receded to make a void, it must have shrunk enough to create a circular gap between it and the proto-Saturnian orb. As we have indicated earlier in this very work, circumstellar disks *do* develop such gaps.<sup>1</sup> One such disk actually displays quite a wide gap between it and the star it hugs very much as in our own hypothesis.

## THE UNBURDENING OF EARTH'S ATMOSPHERE

As we had noted in our previous volumes, Earth had originally been burdened with a more massive atmosphere, a previous state which Frederic Jueneman referred to as *pleiongaea*.<sup>2</sup> Nor was this merely Jueneman's supposition, since other authorities, before him and since, have likewise theorized.<sup>3</sup> At present, there are two Solar System bodies that are similarly shrouded. One is the planet Venus, the atmosphere of which is so dense it crushed the 1967 Russian probe during its descent to the surface of the planet. Calculations have shown it to be 95 times as heavy as the atmosphere of Earth.<sup>4</sup> The other is Titan, one of Saturn's present satellites. While Titan's atmosphere is nowhere as heavy as that of Venus, it is still heavier than that of Earth,<sup>5</sup> calculated to be 1.5 times denser than the one above us.<sup>6</sup> Even Mars, which hardly has any atmosphere at present, has been theorized to have once possessed a "far more massive" atmospheric blanket in its early career.<sup>7</sup>

How much of Earth's previous dense atmosphere had remained at the time of proto-Saturn's flare-up is not now easily ascertained. But there is no doubt that much of it would have been blown away due to that very outburst. As it is now believed, red dwarf stars can flare violently enough to strip atmospheres off any inner planets they may harbor within their clutches.<sup>8</sup> And if red dwarfs can accomplish this, so can their slightly less massive brown siblings, even if to a lesser degree.

According to Jueneman, the angular momentum at the loss of this extra atmosphere over time would have slowed Earth's rotation.<sup>9</sup> While I have no doubt that this would have been so, it would have merely added to the temporary braking of Earth's spin due to proto-Saturn's own discharge, as also noted in one of our previous volumes.<sup>10</sup>

An additional consequence Jueneman brought to my attention is that the "loss of atmospheric overburden...would result in an expansion of Earth due to isostatic rebound."<sup>11</sup> While

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<sup>1</sup> A. Frank, "How to Make a Solar System," *Astronomy* (February 2009), pp. 31-32.

<sup>2</sup> F. B. Jueneman, "Pleiongaea: A Myth For All Seasons," *AEON* II:3 (January 1991), pp. 21 ff.

<sup>3</sup> *God Star*, pp. 346, 348, 380, 385; *Flare Star*, p. 331; *Primordial Star*, p. 114; T. Owen, "The Origins and Early Histories of Planetary Atmospheres," *Bulletin of the American Physical Society* (July-August 1981), p. 801

<sup>4</sup> F. Warshofsky, *Doomsday: The Science of Catastrophe* (N. Y. 1977), p. 55.

<sup>5</sup> A. Stone, "Life's a Beach on Saturn's Moon," *Discover* (August 2006), p. 16.

<sup>6</sup> M. Carroll, "Earth of the Outer Solar System," *Astronomy* (November 2007), p. 36.

<sup>7</sup> T. Owen, *loc. cit.*

<sup>8</sup> C. Impey, "The New Habitable Zones," *Sky & Telescope* (October 2009), p. 23.

<sup>9</sup> F. B. Jueneman, private communiqué (June 19, 1991).

<sup>10</sup> *Flare Star*, pp. 372 ff.

<sup>11</sup> F. B. Jueneman, private communiqué (August 28, 2007).

this, too, would have been so, we must keep in mind that the loss of this overburden did not occur in one single event. I hate to keep referring to my previous works, but, as I had earlier indicated, proto-Saturn had gone through a series of previous flare-ups.<sup>1</sup> Any expansion of Earth due to this particular cause would have occurred in separate steps through that series of similar events.

One more thing to keep in mind is that, at present, we cannot be positively sure that *all* of Earth's extra atmospheric burden was blown away during the particular flare-up under discussion. While I dislike jumping ahead, it should be pointed out that Earth was yet to experience further cosmic catastrophes. It is therefore possible that Earth's atmosphere did not reach its present volume until the last of these.

Finally, as it has recently been disclosed, Earth is *still* losing its atmosphere, as so are all other celestial bodies. "Although Earth's [present] atmosphere may seem as permanent as rocks, it gradually leaks back into space."<sup>2</sup>

"The loss rate is currently tiny, only about three kilograms of hydrogen and 50 grams of helium (the two lightest gases) per second, but even that trickle can be significant over geologic time, and the rate was probably once much higher."<sup>3</sup>

This slight, but continuous, loss is due to thermal and hydrodynamic escape plus chemical and charged particle reactions,<sup>4</sup> all of which we need not here go into. But although Earth is losing more atmosphere than Venus and Mars, if the loss rate does not change, our atmosphere will still last for "several more billion years."<sup>5</sup>

An additional cause of more concern is cosmic impacts. When a comet or asteroid strikes a planet, it has been surmised, it creates an enormous explosion that throws rocks, water, and especially air into space.<sup>6</sup>

"Both thermal and nonthermal escape are like tiny trickles compared with the huge splash when comets or asteroids crash into planets. If projectiles are sufficiently big and fast, they vaporize both themselves and a similar mass of the surface. The ensuing hot gas plume can expand faster than the escape velocity and drive off the overlying air."<sup>7</sup>

I have no doubt, as others have claimed, that various terrestrial scars have been gouged by electrical discharges of planetary proportions,<sup>8</sup> but it is just as certain that solid bodies have also impacted on Earth. As we have seen in this very work and its preceding ones,<sup>9</sup> this is evi-

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<sup>1</sup> *Primordial Star*, pp. 82 ff.

<sup>2</sup> D. C. Catling & K. J. Zahnle, "The Planetary Air Leak," *Scientific American* (May 2009), p. 36.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, pp. 36 ff.

<sup>5</sup> I. Klotz, "Earth Losing Atmosphere Faster than Venus, Mars," *dsc.discovery.com/news* (June 2, 2009).

<sup>6</sup> D. C. Catling & K. J. Zahnle, *op. cit.*, p. 42

<sup>7</sup> *Ibid.*

<sup>8</sup> See *Primordial Star*, pp. 240 ff., for discussion of this subject.

<sup>9</sup> *God Star*, pp. 77 ff.; *Flare Star*, p. 108.

denced by what the ancients themselves reported, and proven by the discovery of meteorites in various parts of the world. It is therefore quite likely that solid debris would have smashed into our world due to proto-Saturn's flare-up on encountering the Sun's heliosphere as well as previous outbursts from the same sub-stellar body. We can therefore include this as an additional cause for the unburdening of Earth's atmosphere.

### MOTHER EARTH IN HEAT

Although Rolf Furuli did not have planetary history in mind, he was not far off the mark when he stated that "ancient chronology cannot be proven because it is built on the interpretation of data that are fragmentary."<sup>1</sup> Even so, just as ancient human history can be roughly pieced together through whatever fragments survived the ravages of time, so can the cosmic drama that led to man's obsession with his past. True enough, when trying to reconstruct the primordial drama with which we are concerned, we can never run the entire gamut of events to ground. For one thing, man was too occupied with safeguarding his own life during the tribulations that followed proto-Saturn's flare-up to pay too much attention to what was really happening all around him, let alone what was transpiring in the changing sky above. His later recollections concerning what had come to pass immediately following the flare is understandably limited and somewhat patchy. Despite all that, as we have documented in an earlier volume of this series,<sup>2</sup> the heat-wave that resulted from proto-Saturn's flare-up did not fail to impress itself on his mutilated memory.

The North American Lakota, otherwise known as the Sioux, remained quite cognizant of the fact that the first being to ever be, whom they called Inyan, existed in "the time when there was no time."<sup>3</sup> It was however believed that Wakan Tanka co-existed with Inyan.<sup>4</sup> This Wakan Tanka, known as the Great Mystery, was an indiscriminate entity, a sort of indefinable spirit, similar to the *ruach* of the Book of *Genesis*, which we have already identified as the universal mytho-historical polar column, or *axis mundi*.

Inyan himself is described as having been shapeless.<sup>5</sup> In other words, very much like the Roman Janus and the Eskimo Ataksak, both of whom were described as having originally had the shape of a mere sphere,<sup>6</sup> Inyan lacked limbs or other appendages. Like the Saturnian deities of other nations, he also lived in darkness.<sup>7</sup> The Lakotan Mother Earth, named Maka, was said to have complained because "she was cold"<sup>8</sup>—which can be taken as an allusion to the frigid climate of the Pleistocene Ice Age. She thus demanded of Inyan that he should banish

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<sup>1</sup> R. J. Furuli, "Studies in Persian Chronology—A Response to Jonsson," *Chronology & Catastrophism Review* (2009), p.31.

<sup>2</sup> *Flare Star*, pp. 370-371.

<sup>3</sup> S. Eddy, *Native American Myths* (London, 2001), p. 9.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> Ovid, *Fasti* I:111; M. Fauconnet, "Mythology of the Two Americas," *New Larousse Encyclopedia of Mythology* (London, 1972), p. 427.

<sup>7</sup> S. Eddy, *loc. cit.*

<sup>8</sup> *Ibid.*



the darkness, at which point light was created.<sup>1</sup>

“Now there was light everywhere,” it was said, “but this was still not good enough for Maka for there was no warmth and no shade.”<sup>2</sup> In order to dispel the cold, part of Inyan became Wi, described as a “brilliant disc” which was said to have “shone on the world” until “everything became hot and bright.”<sup>3</sup> It is unfortunate that, in time, the Lakota came to understand this Wi as the present Sun. But that Wi was proto-Saturn in its new radiant phase is indicated by the immobility of Inyan from whom he was formed. As already noted it, was precisely at this time, following its flare-up, that proto-Saturn began to shine as a true sun. What is also of importance to our study is the statement that, under this new sun called Wi, “there was no respite *from the burning heat*.”<sup>4</sup>

The Maidu of California also tell of this heat at the beginning of what became known as the Creation. “At first,” these natives relate, “the earth was very hot, *so hot it was melted*...”<sup>5</sup>

We encounter the same belief half a world away in India. In speaking of *tapas*, the bodily heat said to be experienced by some mystics, Heinrich Zimmer informs us that, in Vedic lore, “such energy is employed by the gods themselves to many ends,” one of which is “the purpose of creation.” It is said that the Creator “produces the universe” by heating himself. And, quite often, this is accomplished “by internal incandescence.”<sup>6</sup>

Man remembers more than just the heat. Take the Biblical Enosh (sometimes rendered Enos, not to be confused with Enoch). It was said that, in his generation, “God caused the sea to transgress its bounds, and a portion of the earth was flooded.”<sup>7</sup> The ocean, it was said, “flooded a third part of the earth.”<sup>8</sup> Other occurrences that transpired during the same generation has led us to believe that the transgression of the sea at this particular time refers to the inundation of the land due to Earth’s rotational braking at the time of proto-Saturn’s flare-up.<sup>9</sup> In keeping with our surmise that humanity thereafter lost its robustness,<sup>10</sup> we also learn that, in Enosh’s time, “man’s stature was shortened.”<sup>11</sup>

Just as importantly, it was said that “mankind became ill in his time.”<sup>12</sup> In fact, the very name Enosh, derived from *anash*,<sup>13</sup> means “sickly”<sup>14</sup> and/or “incurable.”<sup>15</sup> It is as if the devastation of his generation bestowed its mark as a name on this shadowy figure who, despite the

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<sup>1</sup> *Ibid.*, p. 10.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.* (emphasis added).

<sup>5</sup> R. Van Over, *Sun Songs: Creation Myths From Around the World* (N. Y., 1980), p. 39 (emphasis added).

<sup>6</sup> H. Zimmer, *Myths and Symbols in Indian Art and Civilization* (Princeton, 1974), p. 116.

<sup>7</sup> L. Ginzberg, *The Legends of the Jews*, Vol. I (Philadelphia, 1968), p. 123.

<sup>8</sup> *Ibid.*, Vol. V, p. 152.

<sup>9</sup> *Flare Star*, pp. 419-420.

<sup>10</sup> *Primordial Star*, p. 134.

<sup>11</sup> L. Ginzberg, *loc. cit.*

<sup>12</sup> *Ibid.*, p. 151.

<sup>13</sup> J. Strong, *Hebrew and Chaldee Dictionary* (Madison, N. J., 1890), p. 15.

<sup>14</sup> L. Ginzberg, *loc. cit.*

<sup>15</sup> J. Strong, *loc. cit.*

flurry of Biblical “begats” that led to his own birth, might not even have existed. After all, despite its derivation, the very name Enosh simply means “man.”<sup>1</sup>

An added feature to this ancient memory was the belief that “the dead bodies of men began to decay.”<sup>2</sup> As a finality, God was said to have ultimately destroyed Enosh’s entire generation.<sup>3</sup>

Since sickness could not have been unknown before that era, and cadavers must have been known to decay, what was so remarkable this time around that ancient man saw fit to pass on these inevitabilities as if they were remarkable?

Although we distance ourselves from Hans Hoerbiger’s cosmological theory and its endorsement by Hans Schindler Bellamy, it nevertheless seems that the latter placed his finger on the right button in his interpretation of the above legend. Despite the fact that he supplied a different cause for the phenomena that took place at the time, while mistakenly alluding to Enosh as a “deluge hero,”<sup>4</sup> Bellamy did rightly understand why the sickness and decomposition of the corpses etched itself so vividly in the minds of the survivors. As he aptly paraphrased the incident, what transpired was partly due to the intense heat that suddenly engulfed Earth.

“A very significant allusion to the sudden change of temperature from a cold-temperate to a warm-temperate or subtropical climate is given in one of the old tales of the Jews. In this it is reported that, at the time of the deluge hero Enos, worms and maggots appeared in the bodies of the dead and their flesh became corrupt. Evidently the corpses, stored in caves and other places, were now no longer preserved by the cold which had previously reigned in that part of the world.”<sup>5</sup>

It is not that we accept Bellamy’s reason for the previous preservation of corpses since the dead would have normally been buried. And even then, naturally enough, bodies decayed, although not often in full view of those who buried them. What we do accept is that the influx of cosmic rays released by proto-Saturn’s flare-up, to say nothing of the excessive heat itself, would have caused a wide ranging epidemic—a plague if you wish—that felled humanity in large numbers. Heat-related death due to a rise in temperature in Earth’s geologic past is not unknown to science.<sup>6</sup> And it was due to the heat itself that the cadavers of the fallen would more than likely have decayed on the spot with few survivors left to bury them. Under such widespread circumstances, it is easy to understand why sickness and bodily decay would have been remembered for all time. It was no different when similar plagues hit the cities of the civilized world in much later times.

The above interpretation is corroborated by what the Tchiglit Indians of the lower Macfkenzie River had to say about the event. As these Amerinds told it, “the whole world was

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<sup>1</sup> J. Strong, *op. cit.*, p. 14.

<sup>2</sup> L. Ginzberg, *op. cit.*, Vol. I, p. 123.

<sup>3</sup> L. Ginzberg, *op. cit.*, Vol. I, p. 123.

<sup>4</sup> H. S. Bellamy, *Moons, Myths and Man* (London, 1949), p. 103.

<sup>5</sup> *Ibid.*, pp. 102-103.

<sup>6</sup> See, for instance, K. Wong, “Supersized Serpent,” *Scientific American* (April 2009), p. 28.

submerged, and those who escaped drowning died of a terrible heat-wave.”<sup>1</sup> It is then, however, added that “those who escaped the heat-wave were soon *shivering under a keen frost*.”<sup>2</sup>

How could *that* have come about?

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<sup>1</sup> H. S. Bellamy, *op. cit.*, p. 102.

<sup>2</sup> *Ibid.* (emphasis added).



# Chapter 7

## The Interglacials

### TEMPERATURE REVERSALS

**T**he return to frosty, or freezing, conditions following an abrupt heat wave, as told by the Tchiglit, should not surprise glaciologists since, as we'll soon see, there have been many such drastic fluctuations of climate toward the end of the Pleistocene. This also tells us quite plainly that the bits and pieces that man remembered of this early series of events were accurate enough to be relied on.

Judging by what past climate extremes have left behind—which is not to say we understand all of the signs—there has never been a stretch of cold on Earth, whether a so-called ice era, an ice epoch, or an ice age cycle, that was not repeatedly sliced through by periodic warm spells known as interglacials and/or interstadials. Electrical conductivity measurements on Greenland ice cores have shown that in the late Pleistocene, with which we are presently concerned, Earth's climatic system “consistently and frequently” changed “between glacial and near-glacial conditions in periods of *less than a decade*, and on occasion *as quickly as three years*.”<sup>1</sup>

### THE BLYTT-SERNANDER SEQUENCE

The temperature fluctuations that took place toward the end of the last Ice Age had become known long before the electrical conductivity measurements of the Greenland ice cores mentioned above. These climatic oscillations first came to light in 1829 when Heinrich Dau noticed that the peat in Danish bogs displayed distinct layers. The Royal Danish Academy of Sciences and Letters then offered a prize to anyone who could explain the reason behind these layered sediments. In 1876, Axel Blytt rose to the occasion by suggesting that the layers indicated a series of alternating dry and moist times during which they were deposited. By 1908, Rutger Sernander had further defined these periods as having oscillated between cold and warm temperatures, for which reason the entire stretch became known as the Blytt-Sernander Sequence.

Peat bogs in Germany were then correlated to the Danish ones and matched to Blytt's classification by C. A. Weber. In Sweden, Lennart van Post, one of the founders of palynology, was also involved in its later adaptations as, in England, so was Harry Godwin in 1940. General correspondence with pollen sequences across Eurasia and North America followed in due time.

In the end, however, these past climate fluctuations turned out to be more complex than the Blytt-Sernander Sequence could indicate, especially since the sediments in question did

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<sup>1</sup> K. C. Taylor, *et al.*, “The ‘Flickering Switch’ of Late Pleistocene Climate Change,” *Nature* (February 4, 1993), p. 435 (emphasis added).

not amount to the same number of layers in all localities. Despite all that, the main zones that were proposed on the strength of these earlier investigations came to be accepted by orthodoxy. In chronological sequence the resulting zones were named the Oldest Dryas, followed by the Bølling, the Older Dryas, the Allerød, and the Younger Dryas, the last of which has received the most attention. The three periods dubbed the Oldest Dryas, Older Dryas, and Younger Dryas, were named for *Dryas octopetala* because pollen from this Alpine flower was found in great quantity in cores said to contain ice from the Younger period in question.

## THE OLDEST DRYAS

The first of these cold intervals, the Oldest Dryas, has been calculated to have commenced somewhere between 19,000 and 18,000 years ago, and to have ended somewhere between 14,700 and 14,600 years before the present, for which reason 14,650 years ago is usually given. It should, however, be pointed out right at the start that these calibrated radiocarbon-derived dates, concerning which we'll be having more to say, were actually chosen through comparison with graphs indicating concentration of oxygen isotope ratio cycles not all of which are sharply defined. Besides which, the selection of terminal points on these graphs were often arbitrarily chosen in order to conform with preconceived beliefs.

An attempt has been made to correlate seasonal loess deposits with the advent and cessation of this particular cold spell.<sup>1</sup> Although, as we have claimed, there was no seasonal demarcation prior to proto-Saturn's entry into the Solar System,<sup>2</sup> proto-Saturn would, by then, have already commenced to spiral slowly around the Sun. Given that Earth's tilt to the Sun's ecliptic was then close to what it is now, it can be said that, by then, seasons would have just been born. Yet since the proto-Saturnian system was still at the outmost edge of the Sun's heliosphere, it remains doubtful that seasonal changes would have already become apparent to say nothing of producing distinguishable alternating sediments. Layered sedimentary deposition does not, however, depend on seasonality.

Needless to say, the reason this cold period managed to leave a recognizable mark was because it was preceded and then followed by a warm, if not hot, cycle separating it from the longer phase of the Ice Age proper. Demarcations between these climatic changes are marked by signs left behind by the northward encroachment of forests across the previous tundra conditions at the beginning of the warming periods, and then the southward re-encroachment of the glaciers across the newly forested domains at the commencement of the cooling episodes.<sup>3</sup> This is indicated by the frequent forest fires that took place at the beginning of the warming periods which have left their mark in a series of charcoal residues in various sedimentary layers.<sup>4</sup>

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<sup>1</sup> See, for instance, F. Niessen, *et al.*, "Dust Transport and Paleoclimate During the Oldest Dryas in Central Europe—Implications from Varves (Lake Constance)," *Climate Dynamics* (January 1992), pp. 71-81.

<sup>2</sup> *God Star*, pp. 351 ff.; *Flare Star*, pp. 160-164, 195, 258; *Primordial Star*, pp. 325-326.

<sup>3</sup> See here, D. M. Peteet, "Younger Dryas," in V. Gornitz (Ed.), *Encyclopedia of Paleoclimatology and Ancient Environments* (N. Y., 2009), pp. 993-996.

<sup>4</sup> J. P. Ballard & T. V. Lowell, "A Late Glacial Paleofire Record for East-Central Michigan," *Geological Society of America Abstracts with Programs*, Vol. 41, No. 6 (2009), p. 62.

According to just about all authorities, these cold spells, as well as the warming periods in between, occurred rather suddenly,<sup>1</sup> which invalidates most of the theories that have been proposed for their oscillation.

### THE BØLLING-ALLERØD

The next climatic change that followed is usually referred to as the Bølling-Allerød. This warm period has been calculated to have lasted from 14,600 to 12,900 years ago, which figures are often rounded to 14,000 and 13,000 years. These dates have been dendrochronologically calibrated, such as the 13,000-year figure which was raised upward through this method from the radiocarbon-derived date of 11,000 years ago.<sup>2</sup> We should, however, add that various *other* dates have been offered by *other* parties in support of *other* schemes.

One such other party has proposed that the warming of the period under discussion was actually caused by the “calving and melting of a massive portion” of Antarctic ice. Raising sea levels by as much as 20 meters, the melt water from this ice would have changed the “ocean circulation patterns” held responsible for the mixing of sea water leading to the transport of warmer currents to the shores of colder climes.<sup>3</sup> The “traditional view,” according to which it was the warming that had caused the melting, was thus claimed to have been turned on its head. As this proposal proclaimed, it was the melting that had caused the warming.<sup>4</sup>

Despite models of oceanic circulation based on water temperature, depth, and density,<sup>5</sup> it still remained difficult to assess how such a massive portion of Antarctic ice could have melted without first having been warmed. It had therefore to be admitted that “a strong warming event” had after all been responsible for the melting of the ice. The theory was however forced to restrict this warming to the southern hemisphere. Besides which, since a cause for the sudden warming had now to be found, there was little option but to fall on that old standby which blamed such warming episodes on “changes in Earth’s orbit.”<sup>6</sup> But even that failed to save the theory since it was eventually discovered that the rush of melt-water responsible for the change in oceanic currents had actually taken place “well *after* the onset of warming.”<sup>7</sup> Not wishing to give up on a hypothesis gone awry, this incompatibility was then blamed on the skewing of radiocarbon dates derived from equatorial corals, which skewing was said to have been due to the mixing of bottom with surface waters.<sup>8</sup> It is amazing how much confi-

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<sup>1</sup> D. M. Peteet, *loc. cit.*; I. Delusina, *et al.*, “Neotropical Moisture and Dryness Dynamics at the Late Glacial/Holocene Transition Recorded by Pollen from the Cariaco Basin, Caribbean Sea,” *American Geophysical Union Meeting Abstracts* (December 5-9, 2005).

<sup>2</sup> J. B. Kloosterman, “The Usselo Horizon, A Worldwide Charcoal-Rich Layer of Allerød Age,” *Proceedings of the Conference: New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man* (Bergamo, 2002), p. 152.

<sup>3</sup> G. Peterson, “A New Trigger for Ice Age Retreat,” *American Geological Institute: Geotimes* (May 2003), p. 1.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, pp. 1-2.

<sup>6</sup> *Ibid.*, p. 2.

<sup>7</sup> *Ibid.* (emphasis added).

<sup>8</sup> *Ibid.*



dence is usually placed on radiocarbon dating except when it conflicts with whatever theory happens to be proposed. One even wonders how such a theory could have been proposed in view of the accepted fact that West Antarctica's marine ice sheet is the only one to have survived beyond the last Ice Age.<sup>1</sup>

## ACCUMULATED LAYERS

A duration of 2,168 years for the Bølling-Allerød period was obtained by counting the so-called annual layers in what is believed to be the observable seasonal variations in the Greenland GRIP ice core. Since this, however, clashed with the calibrated dates for the beginning and end of the period, as shown above, in 2005 the layers in that same ice core were counted all over again. No one who knew what was really happening was surprised when this new count revealed a lower figure for the extent of the Bølling-Allerød which was now set at 1,627  $\pm$  52 years.<sup>2</sup>

In general, these layers are said to be formed from annual snowfalls containing distinct summer and winter variations of isotope values supposedly demarcating individual years. With the passage of time, however, the accumulated snow becomes more compressed, turning layers thinner and more difficult to count. What is worse, the compression also ends up mixing younger falls with older ones, thus obscuring the separation between supposed seasonal accumulation. This can even be observed in the plotted graphs of these segregations which show much more distinct peaks in the younger than the older falls. The deeper the ice, the more indistinct are its layers, until a point is reached at which they can no longer be individually distinguished. Never mind last century's claim that retrieved cores are known to contain layered records of annual snowfalls going back 125,000 years.<sup>3</sup> That the counting of such layers is only possible for relatively recent ice has been more recently disclosed.<sup>4</sup> As Sean Mewhinney noted, 10,000 years has been determined as "about the practical limit" for the dating of deep ice.<sup>5</sup> Brian Hills has vouched for an even lower limit, asserting that ice layers that are close to 8000 years "become harder to see and the data is less dependable."<sup>6</sup>

If, as we insist, the proto-Saturnian system was still brushing, and bouncing off, the Sun's outer reaches of its heliosphere during the period of the interglacials we have been discussing, no annual layers could have been deposited, and therefore no age estimates can be derived for these periods from the supposed counting of such layers. Whatever it is that ice specialists think they're counting—and there would have been enough atmospheric fluctuations going on to account for possible layers—has to be something else.

What causes further problems with the Bølling-Allerød is the cold interval of the Older Dryas (not to be confused with the Oldest Dryas) which is claimed to have occurred some-

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<sup>1</sup> D. Fox, "Icemen Cometh," *Discover* (September 2008), p. 65.

<sup>2</sup> I. K. Seierstad, *et al.*, "The Duration of the Bølling-Allerød Period (Greenland Interstadial) in the GRIP Ice Core," *Annals of Glaciology* (August 2005), pp. 337 ff.

<sup>3</sup> W. Churlton, *Ice Ages* (Alexandria, Virginia, 1983), p. 110.

<sup>4</sup> "Oldest Ice," *New Scientist* (January 28-February 3, 2006), p. 5.

<sup>5</sup> S. Mewhinney, *Ice Cores and Common Sense* (April 1989), p. 45.

<sup>6</sup> B. Hills, *Origins: Cosmology, Evolution & Creation* (Cambridge, 2003), p. 164.

where in between the period. The problem here is that this Older Dryas does not show up everywhere, while its signs are often negligible where it does. At best, this specific Dryas might have encompassed a brief duration of slightly cooler conditions, although this, too, is beset with various inconsistencies. For this reason, some authorities do not even mention it, leaving one with the impression the event never transpired.

With or without the intervening colder spell of the Older Dryas, the warm stretch of the Bølling-Allerød is said to have ended abruptly, leading into the next cold period of the Younger Dryas *within a decade*.<sup>1</sup> Although we do accept the sudden termination of these climatic periods, it still amazes us when glaciologists can isolate a decade within a stretch of some 6,000 years long—in this case between the given date for the commencement of the Oldest Dryas, rounded at 19,000 years ago, through the Bølling-Allerød, and the beginning of the Younger Dryas, rounded at 13,000 years before the present.

### FIRE AND ICE

As noted, the abrupt end of the Allerød warm period was followed by the just as sudden onslaught of the Younger Dryas freezing phase. These two periods were demarcated by intense forest fires that left their charcoal signatures all over North America, Europe, Egypt, South Africa, India, and Australia.<sup>2</sup> Such a spate of forest fires ranging over most of the world could hardly have been ignited by lightning storms unless these storms were synchronously orchestrated. But even if such lightning storms could have occurred, the sustaining of the fires they ignited across near-worldwide territories would have required equal stretches of utter woodland dryness. Since the Allerød had been warm through its entire period, it might have been enough to cause such widespread desiccation. But why, then, did these forest fires start at the period's end? And why would worldwide fires lead to a re-freezing of the land?

What seems to have transpired is that the warm period of the Allerød was somehow terminated by an even hotter wave that ushered in a freezing phase. On the surface, this does not seem to make much sense. That something of the sort transpired is however indicated by the already noted Tchiglit memory concerning the frosty period that directly followed the “terrible heat wave” that was said to have exterminated a great portion of their tribesmen.

Granted that this took place, how did it really come about?

### THE YOUNGER DRYAS

Known by different designations in different parts of Europe, sometimes even referred to as the Big Freeze, the Younger Dryas is said to have commenced around 12,900 years ago and to have lasted a mere 1,300 years. Others give 12,800 to 11,600 years before the present with an interval of 1,200 years. These years are often rounded as having been between 13,000 and 11,000 years ago.<sup>3</sup>

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<sup>1</sup> N. Wade, *Before the Dawn* (Harmondsworth, 2006), p. 123 (emphasis added).

<sup>2</sup> J. B. Kloosterman, *op. cit.*, pp. 152, 153.

<sup>3</sup> D. M. Peteet, *loc. cit.*; P. Coyne, “The Ice Age Cometh,” *New Statesman and Society* (September 3, 1993), p. 31; R. B. Alley, “The Younger Dryas Cold Interval as Viewed from Central Greenland,” *Quaternary Science Reviews* (January 1, 2000), pp. 213-226.

I'm not going into all that has been claimed through the years concerning the cause of the event in question, but, until recently, and very much as in the case of the Bølling-Allerød, one of the prevailing theories centered on the reduction of the thermohaline circulation in the North Atlantic Ocean.<sup>1</sup>

It is amazing how the warming of a period can be blamed on divergent ocean currents, which ocean currents are likewise blamed for the freezing of other events. It seems to be seldom realized that changes in ocean currents must themselves be caused by the very changes of the climate they are called upon to solve.

In the present case, the freezing was supposedly brought about by the sudden influx of fresh water due to the North American deglaciation and the emptying of Lake Agassiz,<sup>2</sup> which itself had been fed by the melting glaciers.<sup>3</sup> Scientists from the Universities of British Columbia and Manitoba, the Geological Survey of Canada, and the Smithsonian Institution, actually claim that the influx of fresh water was the sole result of the draining of this lake.

Lake Agassiz is claimed to have been "more than twice the size of the current Great Lakes," containing "more than 162,000 cubic kilometers of water." It stretched "from western Manitoba, east to Quebec and south to North Dakota and Minnesota, some 350,000 square kilometers."

It was during the "rapid retreat" of the north American glaciers that the waters of the lake "suddenly broke" into Hudson Bay and "*within months*, just about the whole lake drained into the North Atlantic."<sup>4</sup>

It got more complicated than that.

As the years went by—and we're not talking decades here—a bunch of new researchers from Germany, Switzerland, and the United States tried their damndest to upset the apple carts that trod the way ahead of them. Although, like those before them, they continued to maintain that the climate change occurred extremely fast, they limited the cooling trend to Western Europe while the *modus operandi* was now said to have been "a sudden change in the wind systems."<sup>5</sup>

While it was finally admitted that the change in climate and the time of its occurrence were beyond full understanding and still holding "many puzzles," those involved in this study still felt confident in dating the occurrence to 12,700 years ago.<sup>6</sup>

Forget all these calculated dates. As we shall soon show, they all turn out to be approximations based on faulty calibrations of a flawed interpretation of misunderstood cosmic effects.

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<sup>1</sup> W. S. Broecker, "What if the Conveyor Were to Shut Down? Reflections on a Possible Outcome of the Great Global Experiment," *GSA Today* (January 1999), p. 1.

<sup>2</sup> *Idem*, "Was the Younger Dryas Triggered by a Flood?" *Science* (May 26, 2006), pp. 1146-1148; S. Lovgren, "Antarctic Ice Collapse Began End of Ice Age," *nationalgeographic.com/news* (March 17, 2003).

<sup>3</sup> R. Dalton, "Blast in the Past?" *Nature* (May 17, 2007), p. 257.

<sup>4</sup> P. Recer, "Massive Canadian Lake Burst Dam Caused Big Chill 8,200 Years Ago," *The Vancouver Sun* (August 15, 2003), p. A12 (emphasis added).

<sup>5</sup> "Tracking Down Abrupt Climate Changes: Rapid Natural Cooling Occurred 12,700 Years Ago," *sciencedaily.com* (August 1, 2008).

<sup>6</sup> *Ibid.*



## PARADIGMATIC UPSETS

As time went by, various paradigms bit the dust. One of them concerned the role Earth's ocean currents were made to play in conveying fresh water that had surged into the North Atlantic Ocean from thawing glaciers into the warmer waters of the same ocean farther south. This had been based on the much older model of the circular current that was believed to transport *deep* cold water from the Labrador Sea into the South Atlantic, thereby cooling the tropics, with warmer *surface* water moving back into northern regions via the Gulf Stream. In addition to our previous criticisms concerning this particular theory, the oceanographer Susan Lozier did not mince words when she was forced to admit that "that concept doesn't hold anymore."<sup>1</sup> This came about through the realization that the cold stream from the north moved in *outer* deep water and not close to the coast as previously thought.<sup>2</sup> Submersible floats that were made to follow underwater currents in a series of investigations that were conducted in the 1990s "showed little evidence" of southbound water from the Labrador Sea.<sup>3</sup>

Another paradigmatic upset concerned Lake Agassiz which could not have supplied the fresh cold water that supposedly rushed into the North Atlantic via Hudson Bay at the inauguration of the Younger Dryas, since the dating of the lake's drainage had been set to "around 8,200 years ago,"<sup>4</sup> much too late to cause the cooling in question.

In fact, let's be quite honest: Despite the theories that were originally forwarded in an attempt to solve the mystery of the Younger Dryas, to say nothing of the various dates that have been supplied for the occurrence, not a single one of them ever ruled the day. As Carl Sagan had reason to state:

"There are many indications of past climatic changes. Some methods reach far into the past, others have only limited capability. The reliability of the methods also differ."<sup>5</sup>

Or, to echo Wallace Broecker: "No one understands what is required to cool Greenland by 16° C and the tropics by 4 ± 1° C" or "to create an ice sheet covering much of North America."<sup>6</sup> Had these changes not left their mark on the land's layered burden, he went on, they would never have entered the minds of the climate dynamics community.<sup>7</sup> Even the best among authorities had to honestly admit that the physics behind these changes remain "poorly understood."<sup>8</sup>

"What is most alarming," wrote Bill Bryson, "is that we have no idea—none—what natural phenomena could so swiftly rattle Earth's thermometer."<sup>9</sup>

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<sup>1</sup> M. Basgall, "Ocean Circulation Doesn't Work as Expected," *physorg.com* (May 13, 2009).

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> P. Recer, *loc. cit.*

<sup>5</sup> C. Sagan, *Broca's Brain* (N. Y., 1979), pp. 189-190.

<sup>6</sup> W. S. Broecker, *op. cit.*, p. 4.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*, p. 3.

<sup>9</sup> B. Bryson, *A Short History of Nearly Everything* (Canada, 2004), pp.430-431.

Or, as Elizabeth Kolbert from the *New Yorker* wrote: “No known external force, or even any that has been hypothesized, seems capable of yanking the temperature back and forth as violently, and as often, as [evidence has] shown to be the case.”<sup>1</sup>

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<sup>1</sup> E. Kolbert, as quoted in *ibid.*, p. 431.

# Chapter 8

## The Clovis Comet

### DEATH FROM THE SKY

The reason behind the disappearance of woolly mammoths, saber-toothed tigers, giant sloths, and other North American species from the Pleistocene epoch, as also that of man's Clovis culture, had been debated for years.<sup>1</sup> Few of these debates had taken catastrophism into account since uniformitarianism did not allow for the cataclysmic end of these beasts.

Starting somewhere in the late 1990s, a new suspect rose to the front of the investigation. Very much like the earlier case involving the extinction of the dinosaurs, the alleged culprit in this case was a supernova.<sup>2</sup> This was the theory that the archaeologist William Topping promoted around that time to account for the disappearance of the Clovis culture. The nuclear chemist Richard Firestone then joined Topping and, in 2001, they went public in an article they published in the aptly-named *Mammoth Trumpet*.<sup>3</sup>

It did not go well. Critics just about massacred the two proponents and Firestone saw fit to retract the claim while distancing himself from Topping. But, by then, the seed had been sown.

Fred Hoyle and Chandra Wickramasinghe also came to the conclusion that the end of ice ages, to say nothing of the interglacials we have been discussing, had to have resulted through the intervention of cosmic interactions. "Left to itself, it is hard to see how anything internal to the Earth could ever break the stable grip of an ice age," they wrote. "Thus to understand the cause of interglacials we must look to external catastrophic events."<sup>4</sup> Unlike Firestone and Topping, however, the "catastrophic events" they had in mind were cometary impacts.<sup>5</sup>

Hoyle and Wickramasinghe were not alone. Johan Kloosterman focused his attention on the global forest fires we discussed above. Despite their worldwide extent, Kloosterman did not fail to realize that "the fires in these widespread regions started synchronously, having one and the same cause."<sup>6</sup> When he added this global incineration to the other calamities known to

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<sup>1</sup> But see *Flare Star*, pp. 443 ff.

<sup>2</sup> That a supernova preceded the eventual choice of a cometary impact as the cause of this extinction is recounted in *Primordial Star*, pp. 228 ff.

<sup>3</sup> R. B. Firestone & W. Topping, "Terrestrial Evidence of a Nuclear Catastrophe in Paleoindian Times," *Mammoth Trumpet* (March 2001), pp. 9-16.

<sup>4</sup> F. Hoyle & C. Wickramasinghe, "Cometary Impacts and Ice Ages," *Astrophysics and Space Science* (March 2001), p. 374.

<sup>5</sup> *Ibid.*

<sup>6</sup> J. B. Kloosterman, "The Usselo Horizon: A Worldwide Charcoal-Rich Layer of Allerød Age," *Proceedings of the Conference: New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man* (Bergamo, 2002), p. 153.

have transpired at the end of the Ice Age—“floods, sea-level rise, earthquakes, stone and mud avalanches, volcanic eruptions, megafauna extinction and the sudden demise of Magdalenian and Clovis culture”<sup>1</sup>—Kloosterman could well see that the entire series of events constituted “a coherent story” that bore the unmistakable marks of a cosmic catastrophe. Very much like Hoyle and Wickramasinghe, he therefore concluded that the end of the Ice Age was “possibly provoked by a cometary impact.”<sup>2</sup>

The geophysicist Allen West next came on the scene in an attempt to rescue the supernova theory with better evidence, but James Kennet, a paleoceanographer who then hailed from the University of California at Santa Barbara, was so skeptical that he actually went into the field with West in order to prove him wrong. As it instead transpired, West ended up convincing not only Kennet but also the previously-bitten Firestone.<sup>3</sup>

The evidence with which West managed to convince his early doubters consisted of various exotic materials in association with a range of Clovis sites, plus a thin geologic layer of sedimentary soil called a black mat that stretched across North America. The material in question included magnetic dust, trapped gas, glasslike carbon, nanodiamonds, and iridium. Besides iron, the magnetic particles were themselves found to be rich in titanium, manganese, vanadium, thorium, and uranium. Potassium-40 was also found to have tainted several Clovis arrowheads as well as the layers in which they were discovered.<sup>4</sup>

The aptly-named black mats, on the other hand, contain the darkened layers of carbonized material that resulted from the series of forest fires we are now familiar with.<sup>5</sup> The fossilized remains of mammoths were said to be abundant beneath this layer, but not above it. “The mammoths come up to the line and not beyond it,” said Kennet. “At some sites, the black layer with impact material shrouds the bones.”<sup>6</sup>

The conclusion was thus reached that the beasts and the human culture in question were the victims of a cosmic impact.<sup>7</sup> “It’s extraordinary,” exclaimed West, “that tens of millions of animals disappeared synchronously at exactly the time when the diamonds and carbon layer are laid down across the continent.”<sup>8</sup> Artefacts from the Clovis hunter-gatherer society also disappear in the layers above the black mat.<sup>9</sup>

A revamped version of the supernova theory that also took account of cosmic impacts was presented at an international conference in September, 2005. The incriminated supernova, located in the constellation Gemini, 250 light-years from Earth, was said to have erupted 41,000

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*

<sup>3</sup> R. Dalton, “Blast in the Past?” *Nature* (May 17, 2007), p. 257.

<sup>4</sup> D. Krotz, “Supernova Explosion May Have Caused Mammoth Extinction,” Lawrence Berkeley Laboratory Research News at [lbl.gov/Science-Articles/Archive/NSD](http://lbl.gov/Science-Articles/Archive/NSD) (September 23, 2005), p. 1.

<sup>5</sup> R. Dalton, *op. cit.*, p. 256; H. Pringle, “Firestorm From Space Wiped Out Prehistoric Americans,” *New Scientist* (May 26, 2007), pp. 8, 9.

<sup>6</sup> C. Lee, “Comet Over Canada Linked to Extinction of Mammoths,” *The Vancouver Sun* (June 12, 2007), p. A7.

<sup>7</sup> J. Ruvinsky, “The Great American Extinction,” *Discover* (August 2007), p. 11.

<sup>8</sup> R. Mitchum, “Scientists Say Comet Killed Off Mammoths, Saber-Toothed Tigers,” *physorg.com* (January 2, 2009).

<sup>9</sup> *Ibid.*





**Clovis hunters whose artefacts are not found above the charcoal black mat of North America.  
(Illustration by Tom Tierney.)**

years ago. The debris that it hurled out is believed to have coalesced into what was described as a swarm of “low-density, comet-like objects,” one of which was said to have impacted in North America about 13,000 years ago.<sup>1</sup>

With the evidence presented falling neatly into place, the renewed supernova-cum-comet proposal was so well received that, less than a year after the conference at which the overhauled theory had been presented, Firestone and West spelled it all out in a popular book which they co-authored with Simon Warwick-Smith.<sup>2</sup> It was all there, including a slight change in the date of the eruption which was raised from the original 41,000 to 44,000 years ago—but I’m not about to quibble about that. Much like this very work and its three prequels, the authors substantiated their theory with the inclusion of various myths, especially those that told of previous “worlds” and their cataclysmic end, with fire raining from the sky, earthquakes below ground, and flooding waters in between. “The result,” one reviewer wrote, “is a believable validation of intrigue and drama that puts Creationists and Scientists on equal footing.”<sup>3</sup> Not quite, but let it be.

Nevertheless, the work did generate fine reviews. There were even one or two high-ranking scientists who felt compelled to give the book their vote of confidence. In a way this was good news since it served to smoothen the path others had trailed toward the acceptance of the mytho-historical record as a valid contribution to scientific investigations. As the years went by, however—and we’re still not talking decades—the supernova element gradually faded into the background. In time, the comet to which it was said to have given birth, referred to by some as the Clovis Comet, came to reign supreme.

For a while there were those who wavered between a meteor or an asteroid as the marauder behind the onslaught of the Younger Dryas,<sup>4</sup> but most researchers were happy to settle on a cometary body that was said to have fragmented high up in the sky.<sup>5</sup> More specifically, it was identified as “a three-mile-wide comet moving at 135,000 miles an hour” that “blew up over Canada with the force of a million nuclear bombs.”<sup>6</sup>

I love the precision with which they can tell these things. It’s almost as if they saw it all happen with their own eyes besides having had their instruments trained upon it. But never mind. It was the heat from this cometary blast that was then said to have set the forests on fire and to have melted “vast stretches of retreating glaciers,” while also “kicking off a cold spell by slowing ocean currents.”<sup>7</sup> The mystery of the Younger Dryas had finally been solved!

The United States would not, however, allow Canada to bask in the honor. Since one of the highest concentrations of nanodiamonds came from a site in Eastern Michigan, a locality

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<sup>1</sup> D. Krotz, *loc. cit.*

<sup>2</sup> R. Firestone, *et al.*, *The Cycle of Cosmic Catastrophes: Flood, Fire, and Famine in the History of Civilization* (Rochester, Vermont, 2006), *in toto*.

<sup>3</sup> The Intuitive-Connections Network at [intuitive-connections.net/2007/book-cosmiccatastrophies.htm](http://intuitive-connections.net/2007/book-cosmiccatastrophies.htm)

<sup>4</sup> A. Minard, “Ancient Meteor Blast Peppered Mammoths With ‘Shrapnel’,” *nationalgeographic.com* (December 14, 2007); R. Dalton, *loc. cit.*

<sup>5</sup> F. Largent, “The Clovis Comet—Part I: Evidence for a Cosmic Collision 12,900 Years Ago,” *Mammoth trumpet* (January 2008), p. 25.

<sup>6</sup> J. Ruvinsky, *loc. cit.*

<sup>7</sup> *Ibid.*

somewhere in the Great Lakes district presented itself as a better possibility for ground zero. According to West and his colleagues, this would have been closer to present Chicago than anywhere in Canada.<sup>1</sup>

The heat generated by the impact is said to have “likely melted much of a glacier that once covered the Great Lakes region” which would have sent “a massive flood” down the Mississippi River into the Gulf of Mexico, the increased fresh water of which would have shifted the currents of the Atlantic Ocean.<sup>2</sup>

While some later reports made mention of a “swarm” of comets, rather than a lone intruder,<sup>3</sup> most continued to invoke a single body which broke up, the fragments of which scattered across the United States,<sup>4</sup> and, according to some, even reached as far as Europe.<sup>5</sup> “This event was large enough to directly kill most everything instantly,” Firestone reported. “Those that survived would have found their food sources devastated, their water polluted, all kinds of things that would have made it difficult to go on much longer.”<sup>6</sup> Most of those who perished, it was said, were burned alive, including something like 70 percent of human beings in North America.<sup>7</sup>

### PEPPERED MAMMOTHS

That Clovis man hunted mammoths there is no doubt.<sup>8</sup> In fact, there was a time, not long ago, when the very extinction of these beasts, as well as other Pleistocene fauna, was blamed on Clovis man.<sup>9</sup> There were some who thought the massacres attributed to this culture were somewhat exaggerated,<sup>10</sup> but the accusation held just the same especially among those who claimed it was the introduction of human-borne viral diseases that jumped across the species line.<sup>11</sup> Even when climate change and cosmic impacts had by the 1980s been suggested as the real cause for the animals’ demise,<sup>12</sup> others continued to believe in what had become known as the overkill theory.<sup>13</sup> By the turn of the century, changing climate was wedded to overkill in an attempt at conciliation,<sup>14</sup> but the marriage ended in divorce, with both theories eventually falling into disrepute.<sup>15</sup> In the end, while Clovis man was exonerated from the

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<sup>1</sup> R. Mitchum, *loc. cit.*

<sup>2</sup> “Study: Diamonds Link Comet to Mammal Extinction,” *CNN.com* (January 2, 2009).

<sup>3</sup> *Ibid.*

<sup>4</sup> L. Mitchell, “Will Work at Allendale County Archaeological Dig (Topper) Rewrite Human History?” *freerepublic.com* (June 8, 2008).

<sup>5</sup> H. Pringle, *loc. cit.*

<sup>6</sup> C. Lee, *loc. cit.*

<sup>7</sup> D. Sensing, “Death From Above, Continent-Wide,” *windsofchange.net* (January 13, 2008).

<sup>8</sup> See here, for instance, R. Claiborne, *The First Americans* (N. Y., 1973), pp. 40 ff.

<sup>9</sup> T. Y. Canby, “The Search for the First Americans,” *National Geographic* (September 1979), p. 330.

<sup>10</sup> *Ibid.*, p. 359; J. Diamond, “The American Blitzkrieg: A Mammoth Undertaking,” *Discover* (June 1987), p. 84.

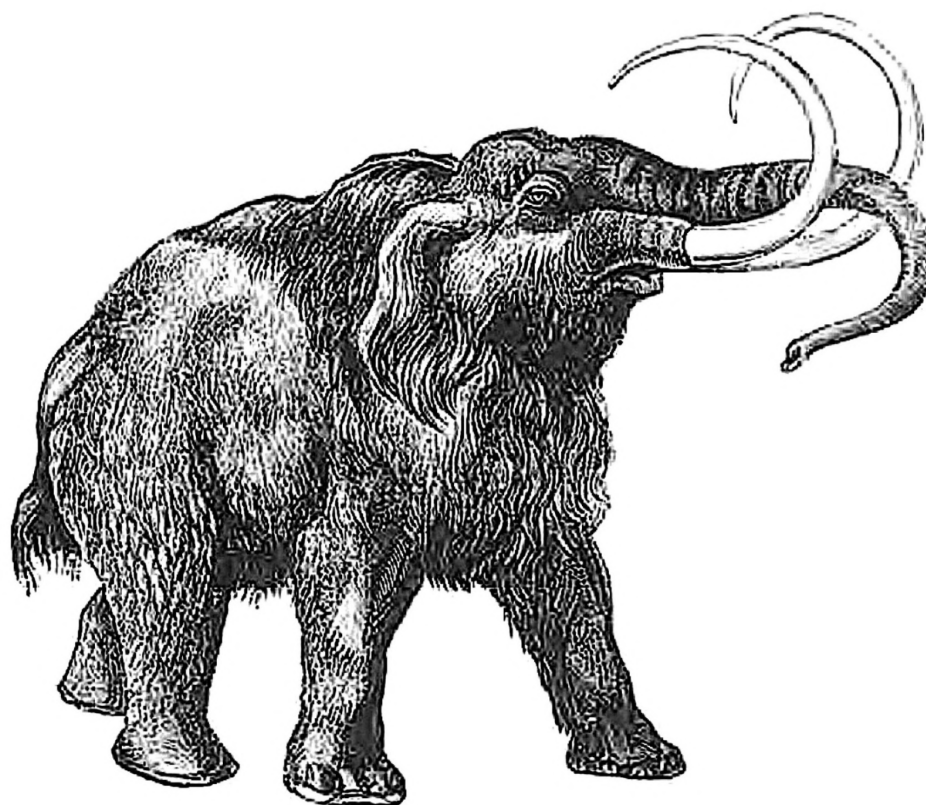
<sup>11</sup> J. M. Adovasio (with J. Page), *The First Americans* (N. Y., 2002), pp. 128-129.

<sup>12</sup> *Ibid.*, pp. 119-120, 128.

<sup>13</sup> R. Gore, “Extinctions,” *National Geographic* (June 1989), p. 695.

<sup>14</sup> Y. Yasuda, “Forest and Civilizations,” in Y. Yasuda (Ed.), *Forest and Civilizations* (New Delhi, 2001), pp. 172-173.

<sup>15</sup> J. Kahn, “Monsters on Ice,” *Discover* (March 2004), p. 59.



Woolly mammoth

crime,<sup>1</sup> it left the mammoths' supposed demise hanging in mid air. In the interim, Clovis man himself was also found to have succumbed. As far as I know, no one ever thought of blaming the mammoths for *his* demise.

It is therefore not surprising that a cause had to be found in order to account for the disappearance of both teams—mammoths and Clovis man—even though some of the mammoths had never really left the scene. As it turned out, not everyone was willing to embrace the cometary innovation, which is inevitably the case when new, especially revolutionary, theories are proposed. Uniformitarians, after all, do not easily retreat. As Heather Pringle noted, “many researchers are likely to greet such apocalyptic scenarios with deep scepticism.”<sup>2</sup> Similar sentiments were expressed by Rex Dalton when he wrote that:

“The history of geology is peppered with such notions—from the ‘cosmic serpent’ theory that the outer planets nudge comets onto a collision path with Earth, to the idea that an impact could have caused the collapse of Bronze Age civilizations. Most of these theories have never become widely accepted by the scientific community.”<sup>3</sup>

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<sup>1</sup> “Ancient Hunters Ledt Off the Hook over Mammoths’ Demise,” *New Scientist* (March 27, 2004), p. 16.

<sup>2</sup> H. Pringle, *op. cit.*, p. 9.

<sup>3</sup> R. Dalton, *loc. cit.*



All of which is reflected in the utterances of Daniel Amick, one of the experts on the Clovis culture:

“When most archeologists heard about [the comet theory] they were somewhat dismissive. We could think, ‘How in the world could we have missed this? How could this spectacular kind of event have occurred and never even dawned on us?’”<sup>1</sup>

None of these criticisms washed neatly off West and Firestone’s backs. They knew exactly what they were up against. Thus, in order to strengthen their theory, they embarked on what can be considered a daring step. They decided to examine mammoth tusks to see if the cosmic blast they believed in had left its imprint on such ivory. The interest in tusks is understandable since, together with horns and antlers, these would have been hard enough to retain the marks of cosmic particles. Eight Alaskan mammoth tusks and one Siberian bison skull that they examined contained exactly the type of scars that they were looking for.<sup>2</sup>

“In the case of the bison,” said Firestone, “we know that it survived the impact because there’s new bone growth around these marks.” As West explained, had the particles penetrated the skin, “they may not have made it through to vital organs; but this material could certainly have blinded the animals and severely injured them.”<sup>3</sup>

What was rather telling is that the marks in question happen to occur on only one side, which is “consistent with a blast coming from a single direction.”<sup>4</sup>

But there was more than just marks—minute punctures, really. As confirmed by an electron microscope, some of the particles that produced them were still embedded in the ivory. Tests then indicated that the minute fragments included a magnetic high iron-nickel content.<sup>5</sup>

## THE CHARCOAL DISPUTE

The palaeontologist Paul Koch was not convinced that there were any continental fires at the time of the supposed event, as neither was the geologist Gerta Keller.<sup>6</sup> Others have however shown that Greenland ice cores *do* contain evidence of such fires “around the start of the Younger Dryas.”<sup>7</sup>

With so much reliance placed on the contents of Greenland ice cores, one would have thought that the above disclosure would have ended the debate. But further analysis of the controversial charcoal was still said to show “no evidence” of the “continental scale fires” demanded by the theory.<sup>8</sup> Where, then, could the charcoal have come from?

According to the results of this new analysis, an increase in fires following normal per-

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<sup>1</sup> R. Mitchum, *loc. cit.*

<sup>2</sup> J. Amos, “Great Beasts Peppered From Space,” *news.bbc.co.uk* (December 11, 2007).

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> H. Pringle, *loc. cit.*

<sup>7</sup> R. Dalton, *op. cit.*, p. 257.

<sup>8</sup> J. Palmer, “Mammoth-Killing Comet Questioned,” *news.bbc.co.uk* (January 29, 2009).

iods of climate change is to be expected.<sup>1</sup> But then the way some scientists think leaves one wondering. “Even if you have cometary impact data,” said Wallace Broecker, “that doesn’t imply they generated wild fires that killed off the mammoths”—which was then echoed by Andrew Scott who hailed from the University of London.<sup>2</sup> Although this *was* a valid argument, it somehow seemed as if a cometary impact was easier to stomach than continental forest fires.

What test results were said to actually indicate is that “while there was significant evidence of *localized* fires throughout a 5,000-year period centered around the Younger Dryas, there was no sign of a *single* continental-scale wildfire event.”<sup>3</sup> According to those who would have nothing to do with cometary interactions, the greatest incidence of forest fires occur “just after periods of abrupt climate change.” This, it has been claimed, is because warming periods tend to “result in the death of plants and trees that more readily provide fuel.”<sup>4</sup> These critics, however, neglected to explain what could have caused these “periods of abrupt climate change.” Besides, why were they concentrating on *continental*—by which they meant North American—fires when, as we have seen, forests had actually been ignited around this time all over the world?

Never mind the heat that must have been responsible for these fires, there were actually those who claimed it was the cold that caused them. According to them, the forest fires occurred *after* the shift from the warm Allerød interstadial to the colder conditions of the Younger Dryas.<sup>5</sup> It was, still according to them, the very “sudden onset” of the colder Younger Dryas that actually “caused the death of many trees” which would then somehow have been set on fire. “It is highly questionable,” they went on, “that an extraterrestrial impact over North America could have caused large-scale forest fires in northwest Europe.”<sup>6</sup> But, more than that, how about the rest of the world?

## THE NANODIAMOND EVIDENCE

Some of those who could not buy the comet theory also began to question the nanodiamond evidence. There were even some, among them nanodiamond experts, who found reason to ask whether such diamonds were really found in connection with the so-called impact layers.<sup>7</sup> But not only were such diamonds found, they have come to light in association with Younger Dryas sediment from all over North America.<sup>8</sup> Nor were such finds exceptional.

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.* (emphasis added).

<sup>4</sup> *Ibid.*

<sup>5</sup> T. van der Hammen & B. van Geel, “Geo(Im)pulse: Charcoal in Soils of the Allerød-Younger Dryas Transition Were the Result of Natural Fires and Not Necessarily the Effect of an Extr-Tterrestrial Impact,” *Netherlands Journal of Geosciences* (December 2008), p. 359.

<sup>6</sup> *Ibid.*, p. 360.

<sup>7</sup> R. A. Kerr, “Did the Mammoth Slayer Leave a Diamond Calling Card?” *Science* (January 2, 2009), p. 26.

<sup>8</sup> D. J. Kennet, “Nanodiamonds in the Younger Dryas Boundary Sediment Layer,” in *ibid.*, p. 94; A. Grant, “The Other Big Bang theory,” *Discover* (April 2009), p. 14.

Similar diamonds have been found in Germany and Belgium,<sup>1</sup> some of which are also said to come from Younger Dryas boundary layers.<sup>2</sup> According to one specialist, they have even been found in “modern peat bogs”<sup>3</sup>—although, with the length of time it takes for peat to form,<sup>4</sup> one wonders how “modern” such bogs can be.

None of this served to still those voices which continued to be raised against the comet theory. The microscopist Dominique Schryvers is on record for stating that they have “no idea” where such diamonds could have come from, but that, as far as she was concerned, their existence does not constitute proof of an impact, which sentiment was echoed by various others.<sup>5</sup> And yet Schryvers had to have known of the association of nanodiamonds with cosmic impacts. As it had already been surmised, microscopic diamonds can form from impact-shocked graphite and/or through the condensation of carbon vapor in impact clouds.<sup>6</sup> They can also be dumped by the impactors themselves since asteroids are capable of transporting diamonds that might have been created around distant stars.<sup>7</sup> And if asteroids, why not comets.

### COSMIC BLASTS

Cometary interaction in Earth’s past continued to be debated, even as these words were being written, and will probably continue to be debated for years to come. Computer simulations of cometary expulsion from the theorized, but still undetected, Oort cloud led a group of researchers to the conclusion that cometary showers in Earth’s past “were few and hence probably did not cause more than one extinction event.”<sup>8</sup> More precisely, what the study showed was that “no more than two or three major impacts could have occurred during what scientists believe was the most powerful comet shower of the past 500 million years.”<sup>9</sup> This event was said to have transpired “about 40 million years ago,” with the extinction having been “relatively minor.”<sup>10</sup> But, as Paul Weissman, senior research scientist at NASA’s Jet Propulsion Laboratory, pointed out, “the extinction implications” of the simulations in question “involve comet showers, not comets in general, and that even a diminished profile of showers does not rule out the role of comets in extinctions.”<sup>11</sup> As he added, one “big strike,” rather than a shower of small comets, is all that would be required.<sup>12</sup> In keeping with Weissman’s view, cometary as well as asteroidal impacts continued to be deemed the primary causes of mass extinctions as well as other calamities. Consider the following:

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<sup>1</sup> R. A. Kerr, *loc. cit.*

<sup>2</sup> *Ibid.*

<sup>3</sup> J. Palmer, *loc. cit.*

<sup>4</sup> See here, *Primordial Star*, pp. 43, 44, 46.

<sup>5</sup> R. A. Kerr, *loc. cit.*

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> J. Matson, “Not Set in Stone (or Ice),” *Scientific American* (October 2009), p. 26.

<sup>9</sup> R. Talcott, “Comets Not to Blame for Mass Extinctions,” *Astronomy* (November 2009), p. 26.

<sup>10</sup> *Ibid.*

<sup>11</sup> J. Matson, *loc. cit.*

<sup>12</sup> *Ibid.*

While we have proposed the reduction of Earth's atmosphere as having been due to proto-Saturn's recurring flare-ups, the entire loss of Earth's *original* atmospheric envelope is now claimed to have been caused by "a colossal impact" that took place between our world and an unspecified "celestial body." Countless other "planetary bodies," including "comets rich in water and other compounds," are then thought to have continued smacking into Earth until somewhere around 3.8 billion years ago. Most, if not all, of the *current* atmosphere is now believed to have risen around that time.<sup>1</sup>

By the year 2010, even continental drift was said to have been "kicked off" by "violent impacts from celestial bodies" somewhere around 2.5 billion years ago." Claimed to be the brainchild of Vicki Hansen from the University of Minnesota Duluth, the suspected culprits were identified as "so-called bolides—objects such as comets and asteroids that crash into planets and moons."<sup>2</sup>

Never mind continental *drift* and all of plate tectonics, the continents themselves were also said to have resulted through asteroidal collisions that "rocked" our world sometime between 3.8 and 2.5 billion years ago. These multiple impacts, as proposed by Andrew Glikson from the Australian National University in Canberra, would have punched holes above rising mantle plumes that normally feed volcanoes. This would supposedly have resulted in deflecting the plumes in question which act to separate Earth's protocontinental crust. The snowballing effect from this is then said to have given birth to further volcanic outbursts, the molten outpouring from which ended up in forming a new dense crust.<sup>3</sup> Jay Melosh of Purdue University does not buy it,<sup>4</sup> as neither do we—and that also goes for Hansen's take on continental drift.

But back to mass extinctions. The one at the end of the Permian period, some 250 million years ago, has also been blamed on an asteroidal impact.<sup>5</sup> Scientists have even claimed to have discovered the smoking gun.<sup>6</sup> But then it all depends on who is doing the searching. Ralph von Frese, a geoscientist from Ohio State University, points to an anomalous gravitational area, known as a mascon, in Wilkes Land, a district of Antarctica. As others have however reported, there is no actual physical evidence that the indicated spot harbors a crater beneath the ice. Nor, whatever it turns out to be, is there any geological proof that the feature dates to the end of the Permian.<sup>7</sup> The team led by Luan Becker, the geochemist from Johns Hopkins University, on the other hand, has fingered "a structure beneath the ocean floor 16 miles (25 km) off Australia's northwest coast." Even so, as Joel Davis honestly reported, neither Becker's nor von Frese's scenario "is yet universally accepted."<sup>8</sup>

So, likewise, with the mass extinction of the dinosaurs that is said to have taken place

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<sup>1</sup> "When Did Earth Get Its Atmosphere?" *Science Illustrated* (January/February 2010), p. 27

<sup>2</sup> "Continental Impact," in *ibid.*, pp.48-55.

<sup>3</sup> S. Simpson, "Violent Origins of Continents," *Scientific American* (January 2010), pp. 60-67.

<sup>4</sup> *Ibid.*, p. 67.

<sup>5</sup> J. Davis, "185 Million Years Before the Dinosaurs' Demise, Did an Asteroid Nearly End Life on Earth?" *Astronomy* (April 2008), pp. 34-39.

<sup>6</sup> *Ibid.*, p. 34.

<sup>7</sup> *Ibid.*, p. 36.

<sup>8</sup> *Ibid.*



65 million years ago.<sup>1</sup> In an attempt to end decades of speculation and scientific misbehavior, a panel of 41 international scientists “officially” determined that the previously proposed asteroidal impact had, after all, been responsible for the extinction.<sup>2</sup> Disregarding evidence to the contrary,<sup>3</sup> the problem was thus resolved by consensus of opinion. As Joshua Morgan, speaking for the team, reported: “We now have great confidence that an asteroid *was* the cause of the extinction.”<sup>4</sup> Basing their claim to “confidence” on their successful elimination of competing theories, they patted each other on the back for a job well done. It did not matter that the only competing theories they managed to eliminate were based on volcanism, especially those series of eruptions which produced the Deccan Traps in India.<sup>5</sup> It was as if no problems happen to burden the asteroidal theory they now certified as being quite legitimate.

Cosmic impacts are not only held responsible for mass extinction events, but even for outbreaks of evolutionary diversification.<sup>6</sup> This, it started being claimed, is what transpired during the Ordovician period some 500 million years ago. A large asteroid is believed to have exploded somewhere in the Solar System, the destruction from the fragments of which would have tended to create local ecological niches into which new species would have evolved.<sup>7</sup>

Not all is well, however—as if we have to say it. Whatever impacted in northern Quebec, Canada, to produce the immense Manicouagan Crater, some say 214 million years ago, is not known to have caused a mass extinction—not even a minor one.<sup>8</sup> And then, how about more recent times? As it happens, what has been deemed an asteroid disintegrated in the atmosphere high above the town of Bone in South Sulawesi, Indonesia, on October 8, 2009. This caused Peter Brown, who then hailed from the University of Western Ontario, as well as others, to “*estimate* that events like this occur about once per decade.”<sup>9</sup> As far as is known, however, the Indonesian blast did not result in any harm or damage.

## IMPACT CRATERS

Although not all cosmic blasts carve craters, some do. And while, as reported by Benny Peiser, the precise dating of such scars “is nearly impossible with current technology,” something like “a dozen craters are known to have been carved out during the past 10,000 years.”<sup>10</sup> A group of scientists from the United States, Ireland, France, Russia, and Australia, who recently formed the Holocene Impact Working Group, claim that “the evidence for such

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<sup>1</sup> C. Zimmer, “The Entangled Bank,” *Discover* (November 2009), p. 44; T. Ferris, “Worlds Apart: Seeking New Earths,” *National Geographic* (December 2009), p. 93.

<sup>2</sup> K. Kelland, “It’s Official: As Asteroid Wiped Out the Dinosaurs,” *reuters.com* (March 4, 2010).

<sup>3</sup> See here, *Primordial Star*, pp. 223 ff.

<sup>4</sup> R. Alleyne, “Dinosaurs Wiped Out by Asteroid Impact that Turned Earth into a ‘Hellish’ Place,” *telegraph.co.uk* (March 4, 2010), emphasis added.

<sup>5</sup> *Ibid.*

<sup>6</sup> T. Ferris, *loc. cit.*

<sup>7</sup> J. O’Donoghue, “The Ordovician: Life’s Second Big Bang,” *New Scientist* (June 14, 2008), pp. 34-37.

<sup>8</sup> J. Hirn, “Do Impacts Cause All Mass Extinctions,” *Sky & Telescope* (September 2009), p. 23.

<sup>9</sup> K. Beatty, “Cosmic Blast Rattles Indonesia,” *skyandtelescope.com* (October 29, 2009), emphasis as given.

<sup>10</sup> R. R. Britt, “Comets, Meteors & Myths: New Evidence for Toppled Civilizations and Biblical Tales,” *space.com* (November 13, 2007).



The Manicouagan Crater, Quebec, Canada, calculated to have been 60 miles across, but reduced to 45 miles due to glaciation and erosion.  
(Image courtesy of NASA,)



impacts during the last 10,000 years” is “strong enough to overturn current estimates” of how often Earth succumbs to these violent contacts.<sup>1</sup>

Even though Peiser hardly had our particular scenario in mind, what he also pointed out is that, since Earth is covered mostly by deep seas, statistical probabilities predict a large number of impact craters out of view in ocean bottoms.<sup>2</sup> And while astronomers were fast in proclaiming their skepticism, it had to be admitted that, until then, no one had spent much time looking for craters in the deep oceans.<sup>3</sup> As of this writing, such work has been left to the likes of Dallas Abbott and the satellite technology she uses in her searches.<sup>4</sup>

## THE MISSING CAVITY

One of the objections that has been raised against the comet theory of the Younger Dryas is that the “cosmic wallop does not seem to have left behind any obvious crater.”<sup>5</sup> And: “No crater has ever been linked to the event.”<sup>6</sup>

On the other hand, “given the nature of the beast,” as one writer put it, should a crater be expected to be found?<sup>7</sup> A comet that would have exploded into fragments up in Earth’s atmosphere, West pointed out, is not likely to have left a crater.<sup>8</sup>

Others have argued that, even had the body in question not fractured before impacting, it would have landed on an ice sheet that could have been anywhere from one to two miles thick.<sup>9</sup> The impact would not only have melted most of the ice, but whatever scars remained would have long disappeared with continued thawing. But would miles-thick glaciers have still been around after more than the claimed 2,000 years of warmth during the Allerød?

In any case, craterless impacts are not unknown. Even hard-boiled meteorites that actually hit the ground do not always leave a crater.<sup>10</sup> Take the meteorite that is believed to have landed on the Martian surface as photographed by Opportunity, one of the Mars Exploration Rovers. There it sits to this day on a loose gravelly surface with nary a dent to mark its landing.<sup>11</sup> So, likewise, with what is believed to have been an asteroid that exploded in the sky over Sudan on October 6 in 2008. Although it left “a cloud of dust in the atmosphere,” its fragments, *280 of which were actually recovered*, landed in the desert without leaving a single scar.<sup>12</sup> There would therefore be nothing mysterious had the so-called Clovis Comet failed to scar the ground on which its fragments landed.

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<sup>1</sup> S. Blakeslee, “Ancient Crash, Epic Wave,” *The New York Times* (November 14, 2006).

<sup>2</sup> R. R. Britt, *loc. cit.*

<sup>3</sup> S. Blakeslee, *loc. cit.*

<sup>4</sup> *Ibid.*

<sup>5</sup> H. Pringle, *op. cit.*, p. 8.

<sup>6</sup> F. Largent, *loc. cit.*

<sup>7</sup> *Ibid.*

<sup>8</sup> R. Mitchum, *loc. cit.*

<sup>9</sup> F. Largent, *op. cit.*, p. 26.

<sup>10</sup> Despite its title, see for instance, C. Moskowitz, “Big Crater Carved by Mysterious Meteorite,” *space.com* (March 11, 2008).

<sup>11</sup> R. Burnham, “The Red Planet: Seeking Far Horizons,” *Astronomy* (February 2006 Special Issue), p. 27.

<sup>12</sup> E. Baldwin, “Game, Set and Match,” *Astronomy Now* (June 2009), pp. 24-26.



Meteorite on Martian surface as photographed by Opportunity Exploration Rover.  
(Image courtesy of NASA.)

Richard Firestone was not, however, happy with this since it would have fared much better for the theory he espoused if a crater had been formed. He thus not only went out looking for such a scar, he actually found more than one.

## THE GREAT LAKES

What Firestone had in mind were the very Great Lakes above which the comet was said to have exploded. Still believing that the “concentration of impact markers” peaks in the Lakes’ vicinity, he continued to preach that the Clovis Comet exploded into fragments right above that area. And while critics continued to note that “no visible crater” exists anywhere *near* the Great Lakes,<sup>1</sup> Firestone pointed to the Lakes themselves as the scars in question.

Unfortunately, he is not consistent on any of this. At one point he claims that the impact created “numerous craters that now persist at the bottom” of the Lakes.<sup>2</sup> At another he reduces the “numerous craters” to only “four large holes.”<sup>3</sup> These “four large holes” then turn into a single “crater” that “could easily be hiding” somewhere in the Lakes. Yet even when he could not pin-point it, he blamed the difficulty of its detection on “the action of water” which “would have erased many of its features.”<sup>4</sup> It was then that someone must have pointed him to Charity Shoal in Lake Ontario.

## CHARITY SHOAL

This suspicious-looking feature consists of a circular depression one kilometer (slightly over half a mile) in diameter—which is about the size of the famous Barringer Meteor Crater in Arizona—and eighteen meters (some fifty-nine feet) deep, which Firestone claims to have formed “near the time” of the Younger Dryas “impact.”<sup>5</sup>

That this depression may be an extraterrestrial impact crater has been known for quite

<sup>1</sup> D. Tennant, “The Carolina Bays: New Evidence Points to a Killer Comet,” *The Virginia-Pilot* (September 9, 2008), p. A1.

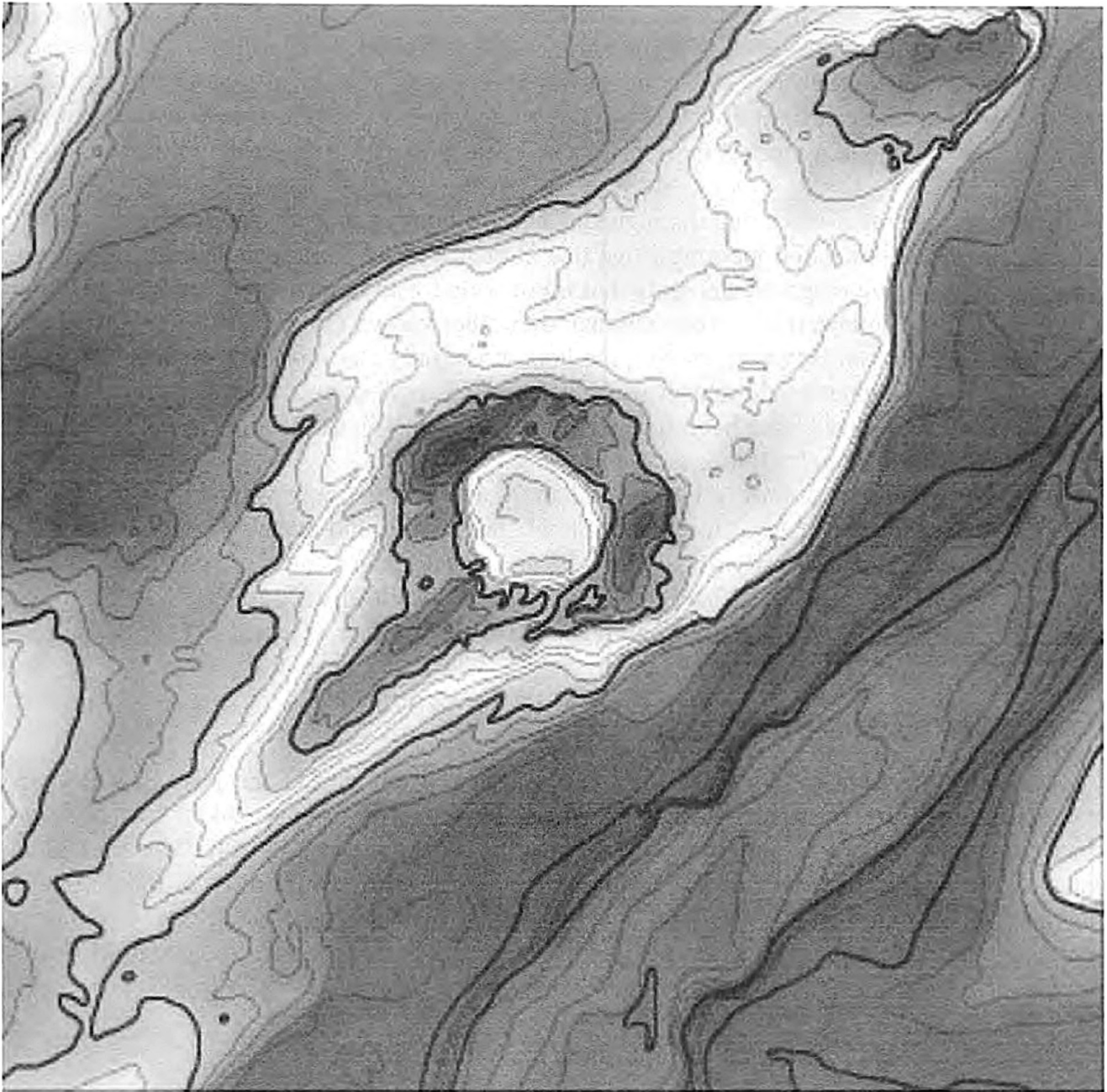
<sup>2</sup> R. B. Firestone, “The Case for the Younger Dryas Extraterrestrial Impact Event: Mammoth, Megafauna, and Clovis Extinction, 12,900 Years Ago,” *Journal of Cosmology*, Vol. 2 (November 2009), pp. 256-285, available at [journalofcosmology.com](http://journalofcosmology.com) (November 10, 2009), p. 2 of 21.

<sup>3</sup> “Marks of a Comet?” *New Scientist* (May 26-June 1, 2007), p. 9.

<sup>4</sup> R. B. Firestone, *op. cit.*, p. 14.

<sup>5</sup> *Ibid.*, p. 15.





**Charity Shoal.**

**(Graphic illustration courtesy of the National Oceanic and Atmospheric Administration.)**

some time, even though other origins for its formation have also been proposed.<sup>1</sup> A team led by Troy Holcombe, who then hailed from the National Oceanic and Atmospheric Administration in Boulder, Colorado, presented substantial lines of evidence which go a long way in nullifying these other possibilities.<sup>2</sup>

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<sup>1</sup> T. L. Holcombe, *et al.*, "Small Rimmed Depression in Lake Ontario: An Impact Crater?" *Journal of Great Lakes Research*, Vol. 27, No. 4 (2001), p. 510.

<sup>2</sup> *Ibid.*, pp.514-515.

While Holcombe and his team cannot be entirely positive that the feature represents an impact crater,<sup>1</sup> the evidence in its favor is far ahead of any other.<sup>2</sup> Regardless of what caused the scar in question, and despite Firestone's assured precision, the actual time of its formation seems somewhat harder to pin down.<sup>3</sup> Even so, while various geological periods and epochs have been vying for recognition,<sup>4</sup> the Pleistocene keeps popping up more often than any other.<sup>5</sup>

Among the characteristics that distinguish Charity Shoal as an impact crater are its raised encircling rim,<sup>6</sup> its elongated tapering ridge that stretches away from it in a southwest direction,<sup>7</sup> and the negative magnetic anomaly that is consistent with other impact sites.<sup>8</sup> And while its entire relief is somewhat low when compared to other known craters of its size, this could be the result of erosion. However, to be quite honest, the only cause of such erosion that Holcombe and his colleagues could muster was glaciation.<sup>9</sup> This does not sit well with their posited possibility that it could have been formed at the *end* of the Pleistocene, or, as they actually phrased it, "during the *early* Holocene."<sup>10</sup>

One other matter to keep in mind, no matter what Firestone may want his critics to believe, is that "no similar feature" to Charity Shoal "has been found elsewhere on the floors of the Great Lakes."<sup>11</sup> That Charity Shoal *might* be an impact crater is not here contested, but its single occurrence in the area is hardly indicative of a cosmic discharge the likes of which Firestone envisions to have taken place high above North America's Great Lakes region.

## THE CAROLINA BAYS

The known "dozen craters" said to have been carved out during the past 10,000 years mentioned above are belittled when controversial terrestrial scarring is taken into account. Among these are the elliptical depressions that pepper the Atlantic coast of the eastern United States all the way from Maryland to Florida—six states in all. Because most of these depressions happen to congregate in the sand-covered coastal plain of North and South Carolina,<sup>12</sup> they have been misnamed the Carolina Bays.<sup>13</sup> There are literally tens of thousands of them,

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<sup>1</sup> *Ibid.*, p. 414.

<sup>2</sup> *Ibid.*, pp. 516-517.

<sup>3</sup> *Ibid.*, pp. 515-516.

<sup>4</sup> *Ibid.*, pp. 510, 515-516.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*, p. 510.

<sup>7</sup> *Ibid.*, pp. 512-514.

<sup>8</sup> *Ibid.*, pp. 510, 514.

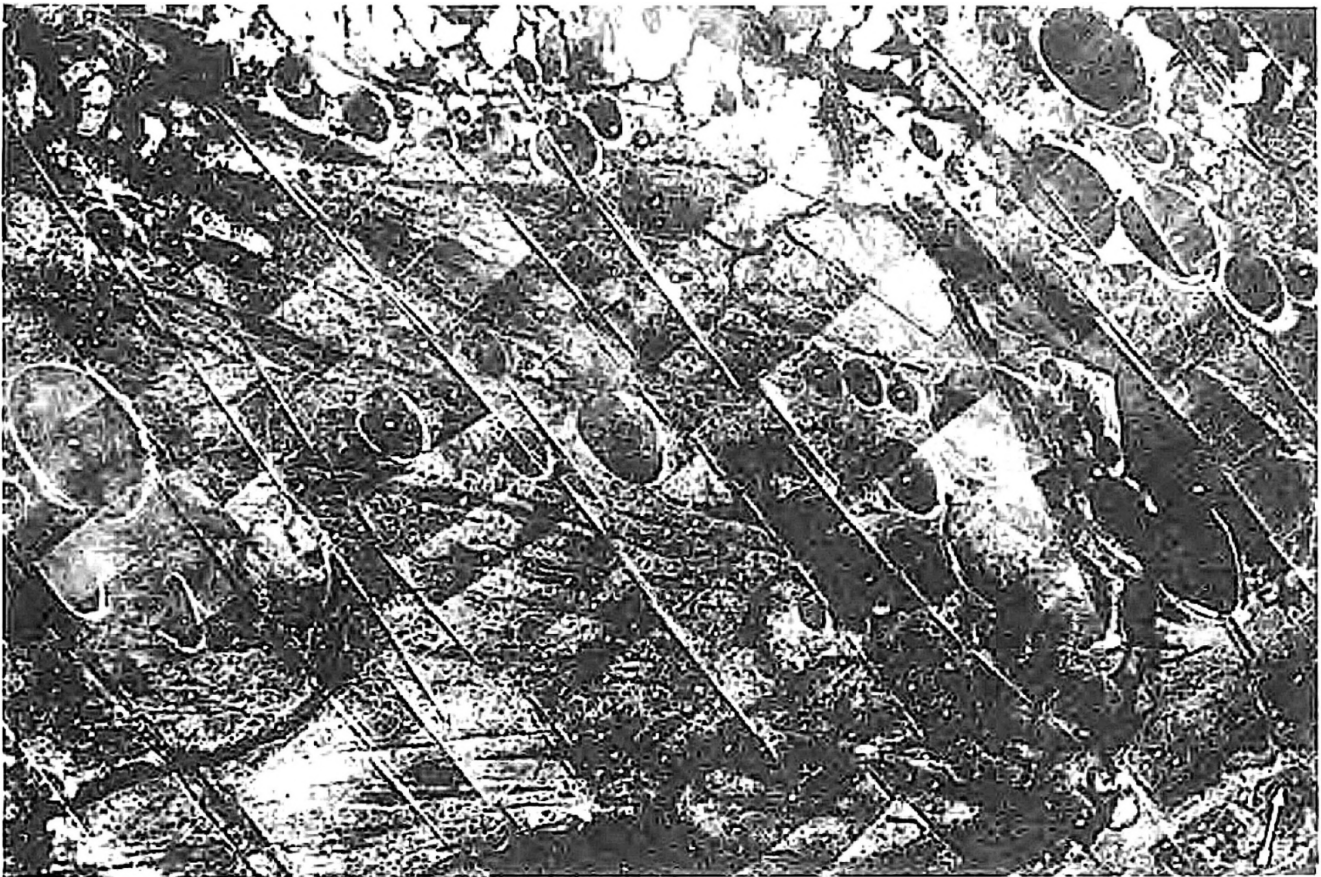
<sup>9</sup> *Ibid.*, pp. 510, 515, 517.

<sup>10</sup> *Ibid.*, p. 516 (emphasis added).

<sup>11</sup> *Ibid.*, p. 514; see also I. Semeniuk, "Ice Age Impact," *Sky & Telescope* (September 2009), p. 24.

<sup>12</sup> W. F. Prouty, "Carolina Bays and their Origin," *Bulletin of the Geological Society of America* (February 1952), pp. 172, 178.

<sup>13</sup> R. B. Firestone, *op. cit.*, p. 1 ff.



Carolina Bays—aerial view.

some say close to half a million.<sup>1</sup> Although they differ slightly in shape, they are mainly elongated and come in various sizes up to ten kilometers (over six miles) in length. Presently acting as lakes and/or bogs and even dry depressions, many of which are “concealed in heavily-wooded, swampy, or river-bottom lands,”<sup>2</sup> they are now appreciated best from high up in the air.<sup>3</sup>

That these depressions resemble nothing better than a series of elongated impact craters has been known since 1932 when two researchers from the University of Oklahoma, Frank Melton and William Schriever, presented a theory at that year’s meeting of the Geological Society of America which proclaimed exactly that. According to them, the Bays are the pockmarks of an impacting comet or a meteoritic shower.<sup>4</sup>

While, as always, there have been those of a different mind,<sup>5</sup> their theories have mainly

<sup>1</sup> W. F. Prouty, *op. cit.*, pp. 167, 174, 179.

<sup>2</sup> *Ibid.*, p. 179.

<sup>3</sup> H. Savage, Jr., *The Mysterious Carolina Bays* (University of South Carolina, 1982), pp. 7 ff.

<sup>4</sup> F. A. Melton & W. Schriever, “The Carolina ‘Bays’—Are They Meteorite Scars?” *Journal of Geology*, Vol. 41, No. 1 (January-February, 1933), pp. 52-66.

<sup>5</sup> See, for instance, H. F. Garner, *The Origin of Landscapes: A Synthesis of Geomorphology* (Oxford, 1974), pp. 436-438; D. S. Allan & J. B. Delair, *Cataclysm!* (Santa Fe, New Mexico, 1997), p. 282 where various sources are cited; “Marks of a Comet?” *New Scientist* (May 26-June 1, 2007), p. 9.



fallen along the way.<sup>1</sup> Aerial photography and, more recently, satellite data has convinced most of those who have delved into the subject that a series of shallow impact craters is what the Bays represent.

As originally expounded by Melton and Schriever, the Bays were formed by the direct impact of a vast number of bodies swarming in at a low angle from a northwest direction. One of the main problems with this theory was the lack of cosmic fragments in the Bays, to say nothing of the fused glass that should have resulted from the impacted sand on which the fragments landed and which, at that time, had not yet come to light.<sup>2</sup> It was also argued that the meteoritic theory fails to account for “the great size of the bays, their shallowness, and the lack of undisturbed strata” beneath their beds.<sup>3</sup> As William Prouty, from the University of Pittsburgh, additionally noted, “it is often contended that the larger bays measuring several miles in diameter are large in comparison to known meteor craters, and that meteors of such size would probably explode on contact with the earth, giving circular instead of elliptical craters.”<sup>4</sup>

These difficulties were laid aside by Prouty when his revised concept attributed the craters to a succession of air-shock blasts rather than a series of direct impacts. As he himself explained, “the depressions now known as Carolina Bays were formed not by direct splash and explosion of a meteorite hitting the hardrock Earth, such as at Meteor Crater, Arizona, but by the air-shock waves which in the sand cover of the Coastal Plain could readily make a shallow depression, many times the size of the splash crater.”<sup>5</sup>

One of the crucial pieces of evidence that Prouty forwarded in favor of his revised meteoritic theory is the high magnetic area associated with the Bays.<sup>6</sup> It has furthermore since then been claimed that there is even better evidence to be had. Sediments from the Bays that have been tested by Firestone, West, and a host of other specialists from diverse disciplines, have revealed unusually high concentrations of microspherules, enriched levels of iridium, and even nickel, at some sites, all of which are considered “typical markers” of extraterrestrial impacts.<sup>7</sup>

While some of the meteoric fragments would have been vaporized out of existence through the heat generated by atmospheric friction,<sup>8</sup> quite a few shards did actually manage to hit the ground. They did not land in the Bays themselves, but, in accord with Prouty’s concept, at a distance ahead of them,<sup>9</sup> from where they’ve been collected in abundance.<sup>10</sup> “The great concentration of adjacent meteoritic material” that is found to the northwest of the Bays,

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<sup>1</sup> W. F. Prouty, *op. cit.*, pp. 170-172, 198-209.

<sup>2</sup> *Ibid.*, pp. 172, 177.

<sup>3</sup> *Ibid.*, p. 210.

<sup>4</sup> *Ibid.*, p. 222.

<sup>5</sup> *Ibid.*, p. 210.

<sup>6</sup> *Ibid.*, p. 221.

<sup>7</sup> F. Largent, *loc. cit.*

<sup>8</sup> W. F. Prouty, *op. cit.*, p. 218.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*, p. 214.



wrote Prouty, “is considered a likely part of the meteoritic shower forming the Carolina bays.”<sup>1</sup>

While most of the Bays are elliptical or oval, some are oddly heart-shaped. As Prouty ably demonstrated, these are due to the overlapping of two, or in some cases even three, individual craters.<sup>2</sup> In fact, quite a few of the larger Bays are the product of such superimposed scars,<sup>3</sup> some even exhibiting more than one rim.<sup>4</sup>

Other factors, according to Prouty, that have tended to disfigure some of the Bays include the constant buffeting of sea waves.<sup>5</sup> Also of importance is the “deposition of silt over the coarse bottom sand.” According to Prouty, this shows that “*the bays were formed suddenly* and were soon filled with water” followed by “sedimentation from a wind swept barren area.”<sup>6</sup>

That the blasted region had been heavily forested is indicated by the remains of yellow pine found in some of the Bays,<sup>7</sup> as also by a large number of prostrate trees of huge size that have been found buried some fourteen feet under the ground in adjacent areas.<sup>8</sup>

Evidence of the widespread fires that ensued right after has been shown by Murray Buell when he investigated the “abundance of charred plant fragments and quantities of fine charcoal” in the peat that formed in some of the Bays.<sup>9</sup> This evidence has been more recently confirmed by Firestone, West, and company who recovered “spongy carbon spherules, glass-like carbon, soot, and polycyclic aromatic hydrocarbons, all evidence of high-temperature fires” including “carbon fullerenes containing demonstrably extraterrestrial helium” from some of the Bay sediments they tested.<sup>10</sup>

Because the helium in question—that is, Helium-3—is “an isotope not found naturally on this planet,”<sup>11</sup> one would have thought its presence would have been what clinched the matter. As far as West himself was concerned, however, the “clincher” was the nanodiamonds contained within the carbon spherules that lines several of the larger Bays.<sup>12</sup>

Critics were still not satisfied, claiming that all the exotic material recovered from the Bays and elsewhere in the black mat “rain down on Earth all the time as dust from outer space.”

West retorted by pointing out that, while this was true, the material he and his colleagues were concerned with is “many times more abundant” than what can be retrieved from “normal background levels.” Such high levels, he was right in pointing out, “are found only in associa-

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<sup>1</sup> *Ibid.*, p. 222.

<sup>2</sup> *Ibid.*, pp. 197, 210-214.

<sup>3</sup> *Ibid.*, p. 214.

<sup>4</sup> *Ibid.*, p. 174.

<sup>5</sup> *Ibid.*, p. 193.

<sup>6</sup> *Ibid.*, p. 178 (emphasis added).

<sup>7</sup> R. B. Firestone, *op. cit.*, p. 12.

<sup>8</sup> H. Savage, Jr., *op. cit.*, p. 96.

<sup>9</sup> W. F. Prouty, *op. cit.*, p. 191.

<sup>10</sup> F. Largent, *loc. cit.*; R. B. Firestone, *op. cit.*, pp. 5-6, 11-12.

<sup>11</sup> D. Tennant, *loc. cit.*

<sup>12</sup> *Ibid.*

tion with cosmic impacts.” But, as Diane Tennant had every reason to report, not all detractors were convinced.<sup>1</sup>

In the meantime, that *numerous* craters can be carved by the fragments from the outburst of a *single* bolide has been proven by the 1947 iron meteorite that blew up in the atmosphere over Russia. Exploding high above the Sikhote-Alin Mountains, the fragments from the blast created up to 100 separate craters.<sup>2</sup> There is also a site in Poland above which a large meteor is known to have exploded, the wreckage from which created a series of small indentations which have now turned into lakes.<sup>3</sup>

## CRATER ORIENTATION

One remarkable feature the Carolina Bays have become famous for among catastrophists in general is the parallelism of most of their long axes which roughly extend in direction from northwest to southeast. That this alignment is due to the impactors’ directional path was recognized by Melton and Schriever in their original 1932 report. “If the cosmic masses approached this region from the northwest,” they wrote, “the major axes would have the desired alignment.”<sup>4</sup>

Most of the Bays also exhibit elevated rims of earth at their southeastern termination. In fact, the deepest part of most of them occurs toward their southeast end.<sup>5</sup> This, according to Prouty, “is to be expected if formed by meteorites moving from the northwest and hitting the rotating Earth at a moderate angle to the horizontal.”<sup>6</sup> An additional indicator to this are the magnetic highs already mentioned in association with the Bays,<sup>7</sup> which highs are also prominent at their southeastern end.<sup>8</sup>

It is this orientation, more than anything else, that led Firestone and company to tie these indentations to the cosmic blast they maintained took place above the Great Lakes region. The reason for this was simple enough. As it has been pointed out, extended lines drawn through the Bays’ axes to the northwest would pass close to the Lakes in question.<sup>9</sup> True enough, but others converge in southern Canada,<sup>10</sup> over Hudson Bay,<sup>11</sup> which, when one considers the amount of cosmic diamonds found in its marginal sediments,<sup>12</sup> is not surprising. One can even say that Canada got its starring role back after all. It is this revelation that caused Firestone to broaden the atmospheric locality of the cometary outburst above the wider area that had been

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<sup>1</sup> *Ibid.*

<sup>2</sup> D. Mosher, “Crater Could Solve 1908 Tuguska Meteor Mystery,” *space.com* (June 26, 2007), p. 2.

<sup>3</sup> *Ibid.*

<sup>4</sup> F. A. Melton & W. Schriever, *op. cit.*, p. 56; see also W. F. Prouty, *op. cit.*, p. 172.

<sup>5</sup> *Ibid.*, pp. 174, 214.

<sup>6</sup> *Ibid.*, p. 214.

<sup>7</sup> *Ibid.*, p. 217.

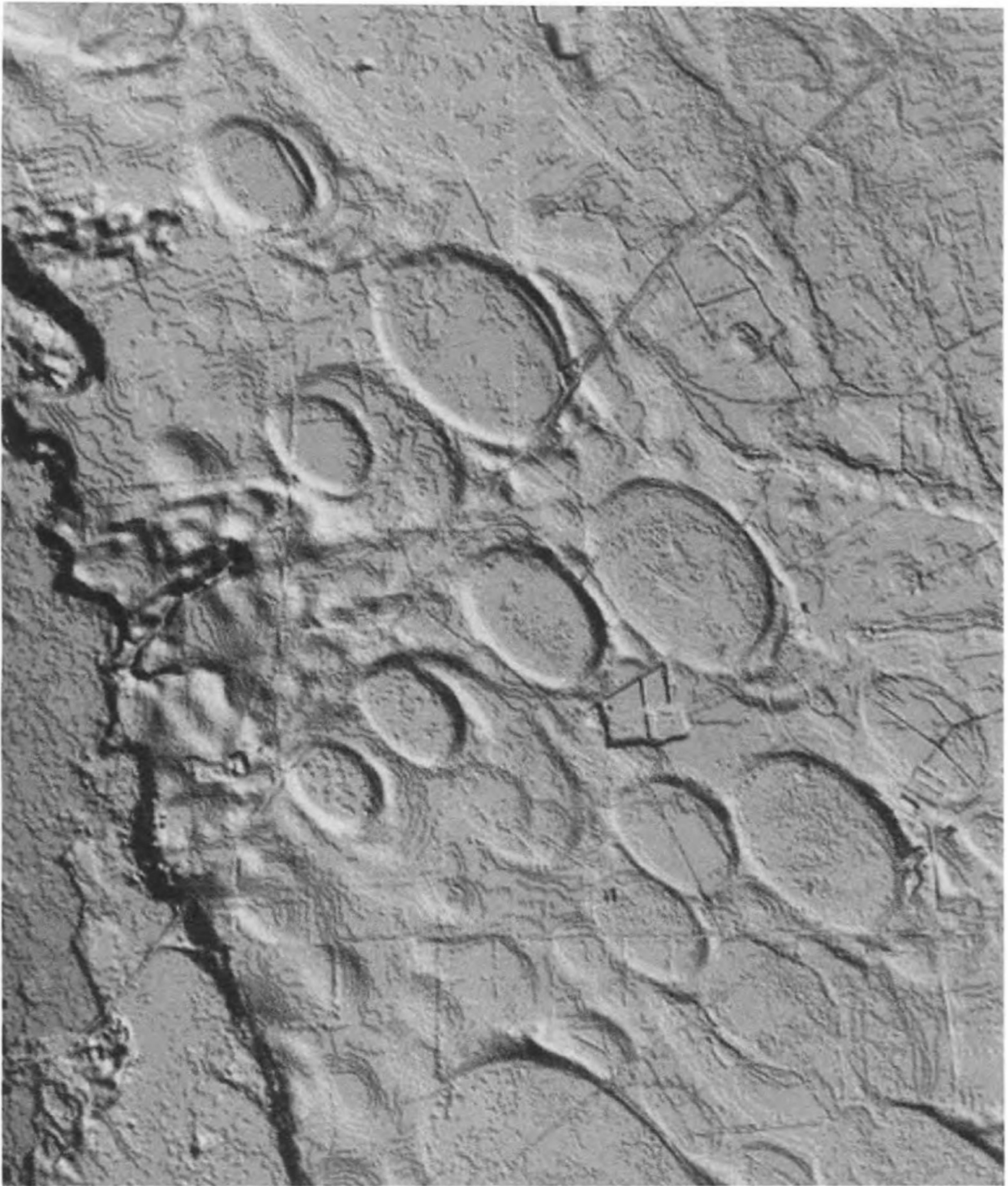
<sup>8</sup> *Ibid.*, p. 221.

<sup>9</sup> D. Tennant, *loc. cit.*

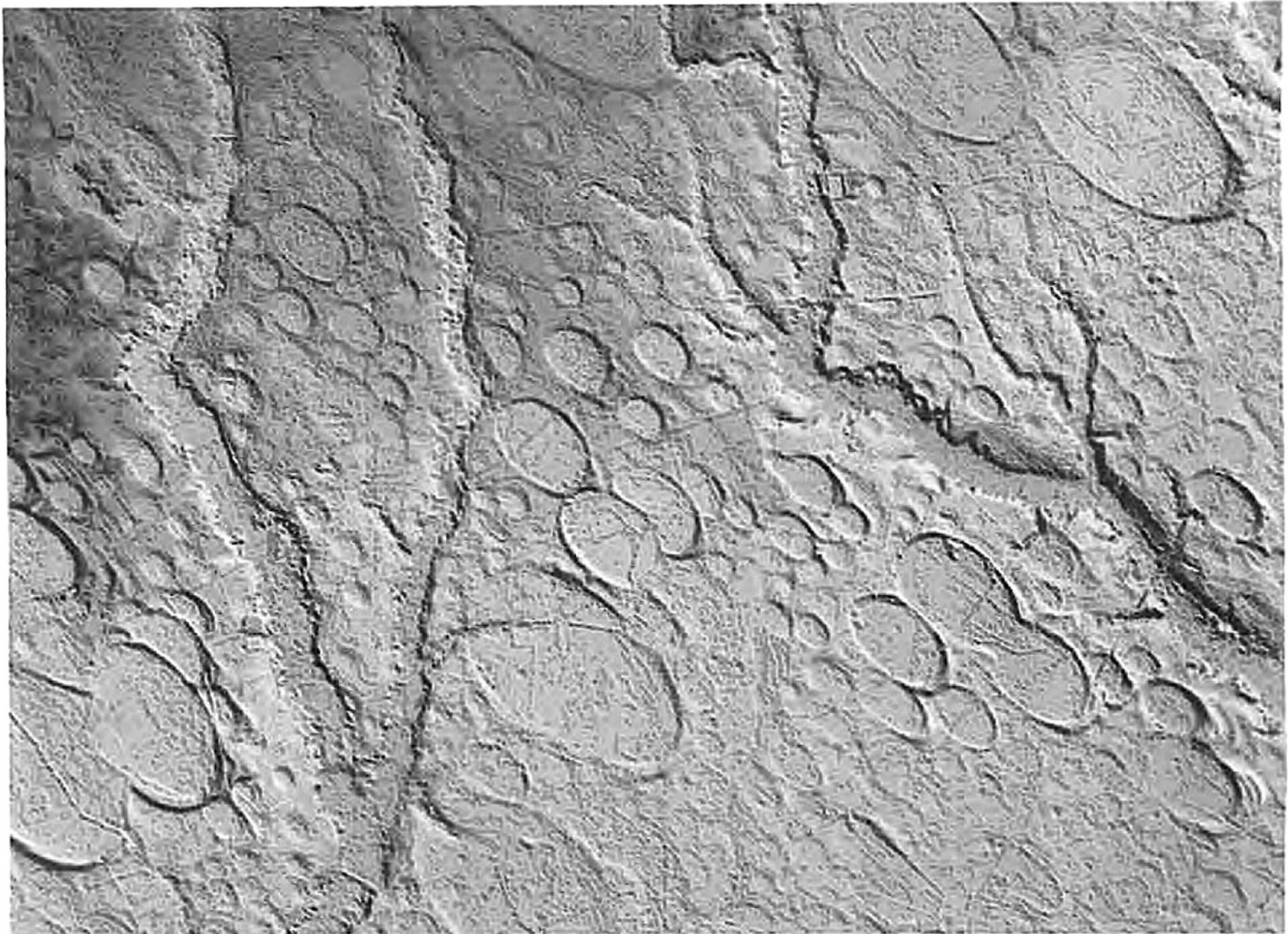
<sup>10</sup> *Ibid.*

<sup>11</sup> R. B. Firestone, *op. cit.*, pp. 1, 5, 6.

<sup>12</sup> *Flare Star*, pp. 431–432.



**The northwest-southeast orientation of the Carolina Bays.**  
(Illustration courtesy of the North Carolina Department of Transportation.)



**More Carolina Bays.**

(Illustration courtesy of the North Carolina Department of Transportation.)

covered by the Laurentide Ice Sheet.<sup>1</sup> Firestone then draws our attention to the fact that, while this ice sheet had been centered over Hudson Bay, it actually stretched all the way to the south of Lake Ontario.<sup>2</sup> He should, however, have been more explicit by informing those who did not quite know that the Laurentide glaciation had covered *most* of Canada and a goodly portion of the adjoining United States.<sup>3</sup> That's an awful wide terrain to point one's finger at as the focus of a single happenstance.

Additional to that, while these local variations to the Carolina Bays' orientation have long been realized,<sup>4</sup> there's more to them than actually meets the eye.

“...as one moves up the coast there is a tendency for the bays to become more and more easterly in orientation, until in Maryland they approach an east-west direction.

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<sup>1</sup> I. Semeniuk, *op. cit.*, p. 18; R. B. Firestone, *op. cit.*, p. 18.

<sup>2</sup> *Ibid.*

<sup>3</sup> See here, for instance, J. M. Adovasio, *op. cit.*, pp. 44, 45.

<sup>4</sup> W. F. Prouty, *op. cit.*, p. 170.



Likewise, as one moves down the coastal plain the bays' long axes tend to rotate in a clockwise direction, until those found in south Georgia generally display an almost north-south orientation. A similar effect can be observed as one moves from east to west."<sup>1</sup>

These variations have been explained by Prouty as having been caused by "the fanning-out effect" of the meteoritic bodies as they passed through the atmosphere's resisting medium.<sup>2</sup> "The difference in orientation due to partial fragmentation of some of the meteoritic masses before hitting the Earth is logical," he wrote. "Those thrown to the left would travel a path different from those thrown to the right."<sup>3</sup> As he goes on, "the larger bays have much less variation in orientation than the smaller bays, as would be expected from the revised meteoritic theory."<sup>4</sup> One other factor that would have been involved in these directional variations is the slight change imposed on the bolides' path by Earth's rotational speed.<sup>5</sup>

### ADDITIONAL SCARS

The story does not end there because so-called rainwater basins, which are similar depressions to the Carolina Bays, also occur in Texas, New Mexico, Oklahoma, Kansas, and Nebraska. And these, too, happen to bear a general orientation, but toward the northeast rather than the northwest. And yet, as Firestone was sure to mention,<sup>6</sup> given their geographical locality, this also tends to align their long axes in the general direction of the Great Lakes.<sup>7</sup>

There are others that Firestone could have mentioned, such as the oriented lakes that pepper the 25,000 square-mile area along the arctic coastal plain of north Alaska. As with the Carolina Bays, they exist in tens of thousands and come in different sizes from a few feet to nine miles long. Like the Carolina Bays, they are generally elliptical in shape and, while they also sometimes overlap, they mostly occur in rows that are parallel to each other.<sup>8</sup> And, still very much like the Carolina Bays, most of their alignments lie in a northwest-southeast direction.<sup>9</sup> As if that's not enough, so, similarly, in the Yukon.<sup>10</sup>

But why restrict such scars to North America? 20,000 square kilometers—over 7,700 square miles—of the ocean bottom in the middle of the North Sea is so pockmarked with craters it has been likened to "a miniature lunar landscape." Although not as large as the ones so

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<sup>1</sup> H. Savage, Jr., *op. cit.*, p. 7.

<sup>2</sup> W. F. Prouty, *op. cit.* pp. 186, 190.

<sup>3</sup> *Ibid.*, p. 187.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, p. 190.

<sup>6</sup> R. B. Firestone, *op. cit.*, p. 5.

<sup>7</sup> D. Tennant, *loc. cit.*

<sup>8</sup> R. K. Black & W. L. Barksdale, "Oriented Lakes of Northern Alaska," *Journal of Geology*, Vol. 57 (1949), pp. 105-118.

<sup>9</sup> *Ibid.*

<sup>10</sup> C. E. Carson & K. M. Hussey, "The Oriented Lakes of Arctic Canada," *Journal of Geology*, Vol. 70 (1962), pp. 417-439.

far mentioned, these craters, too, are said to be elliptical in shape with a shared directional alignment.<sup>1</sup> Similarly aligned, even if still smaller, depressions are also to be found in Siberia,<sup>2</sup> Holland,<sup>3</sup> and even Bolivia<sup>4</sup> and Chile<sup>5</sup> in South America.

It is highly improbable that a single bolide exploding above the Great Lakes region, or anywhere over the Laurentide Ice Sheet, would have flung its cosmic debris, east and west, north and south, scarring the land in all these countries. Such a wide dispersal can best be visualized as the result of more than one explosive event. Among other matters to which we shall soon come, an approach of the cosmic debris in question from an explosion above the Great Lakes is belied by the very Charity Shoal in one of the very lakes that Firestone introduced as evidence. If anything, this depression should be aligned to the southeast for it to fall in line with the general direction of the impactors at the Carolina Bays. On the contrary, as indicated by its elongated tapering ridge, Charity's alignment is in the opposite direction toward the southwest,<sup>6</sup> which indicates an approach from the northeast. Besides which, it is not known exactly when the feature was created.<sup>7</sup> Although, as already noted, the Pleistocene keeps cropping up in relation to the formation, it was definitely in existence "*prior* to the last glacial advance,"<sup>8</sup> and could not therefore have anything to do with the so-called Clovis Comet.

One other matter not to lose sight of is that the northwest-southeast directional paths of the impactors in Earth's *eastern* hemisphere would hardly congregate over North America's Great Lakes region. Besides, as elsewhere in the north, see above, not all oriented scars in southern lands align from the northwest to the southeast. Some of the directional grooves and other wounds in Bolivia's Beni basin align themselves in a reversed direction. This is quite obvious in that country's oriented lakes only some of which happen to stretch in a northwest-southeast direction, while others align themselves in a northeast-southwestern track.<sup>9</sup> Once again, none of these alignments would congregate, or even pass, above North America's Great Lakes region or Hudson Bay. What is worse is that these differently aligned indentations call out loudly for a different line of approach. The directional path of the impactors has in fact caused much confusion. To give but one example, Bernard Delair and Derek Allan speak of the bombardment as having come from the south.<sup>10</sup>

What further complicates the matter with the Bolivian lakes is that they also happen to

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<sup>1</sup> R. McQuillin & N. G. T. Fannin, "Explaining the North Sea's Lunar Floor," *New scientist*, Vol. 83 (1979), pp. 90-92.

<sup>2</sup> D. S. Allan & J. B. Delair, *op. cit.*, p. 285.

<sup>3</sup> D. Hoffleit, "Bays in Holland," *Sky & Telescope*, Vol. 12 (1952), p. 8.

<sup>4</sup> G. Plafker, "Oriented Lakes and Lineaments in Northern Bolivia," *Bulletin of the Geological Society of America*, Vol. 75 (1964), pp. 503-522.

<sup>5</sup> J. Gonzales & A. Aydin, "The Origin of the Oriented Lakes in the Andean Foreland, Parque Nacional del Paine (Chilean Patagonia)," *Geomorphology* (May 15, 2008), pp. 502-515.

<sup>6</sup> See here T. L. Holcombe, *et al.*, *op. cit.*, p. 512.

<sup>7</sup> *Ibid.*, p. 510.

<sup>8</sup> *Ibid.*, p. 517.

<sup>9</sup> G. Plafker, *loc. cit.*

<sup>10</sup> D. S. Allan & J. B. Delair, *op. cit.*, pp. 288, 292; see also J. B. Delair, "Another Late Pleistocene Impact Signature: The Silverpit Crater," *Chronology & Catastrophism Workshop* (2006:1), p. 6.

align themselves with the system of geologic faults that straddle the 45,000 square-mile-area of the Beni basin.<sup>1</sup> This is additionally indicated by the rivers running through this area, as well as through the basins bordering Bolivia, Peru, and even Brazil. Not only do present-day rivers in this wide general area tend to run in a northeast-southwest direction, parallel to the major tectonic faults at the base of the Andean mountains, but so do fossil river traces.<sup>2</sup> This is then repeated in the oriented lakes scattered across the Chilean section of the Patagonian region, which also align themselves with the Andean fault system.<sup>3</sup> Since it is hardly possible that these associated lineaments can be due to coincidence, it has naturally been assumed that the oriented lakes and rivers in question are controlled by the surface indentations of the faults, and that they, in fact, owe their very existence to the same tectonic strains.<sup>4</sup> If this happens to be correct, it will throw considerable doubt on the cosmic origin of the oriented indentations north of the equator, unless, of course, it can be indicated *beyond reasonable doubt* that the tectonic faults in question are themselves due to the same directional impacts that would have formed the indentations. And, to be sure, this is not an irrational assumption as can be surmised from the surface of Phobos. As can be distinctly seen from detailed images of this Martian satellite, parallel rows of impact craters ended up in forming linear depressions akin to fault lines. Although we can't be sure of this just yet, if on Phobos, why not on Earth?

Despite that, the nagging question still remains: How many of these oriented scars can *validly* be blamed on cosmic impacts? The ones that we can safely hold on to are those that have managed to retain actual cosmic wreckage or are linked to such debris in their immediate vicinity. While, as we have seen, this certainly includes the Carolina Bays, we must temporarily stand aloof from other oriented scars until further and better evidence allows us to determine their actual cause.

## A MATTER OF IDENTITY

As we have seen, the sudden re-cooling of the Younger Dryas was originally theorized to have been caused by a relatively close supernova. Only later was the blame shifted to a comet which was said to have been born from the previously-assumed stellar explosion. In analyzing the nature of the Carolina Bays, however, Allan and Delair could not buy the comet theory. "We now know, of course," they wrote, "that even large comets apparently lack sufficient mass to cause crustal damage like that presented by the 'Carolina Bays'." They thus considered an impactor "of meteoric origin" as being "more feasible."<sup>5</sup> Their belief in the lack of sufficient mass in comets had to have been based on Fred Whipple's oft-repeated 1950 declaration that comets consist of conglomerated ice and rubble.

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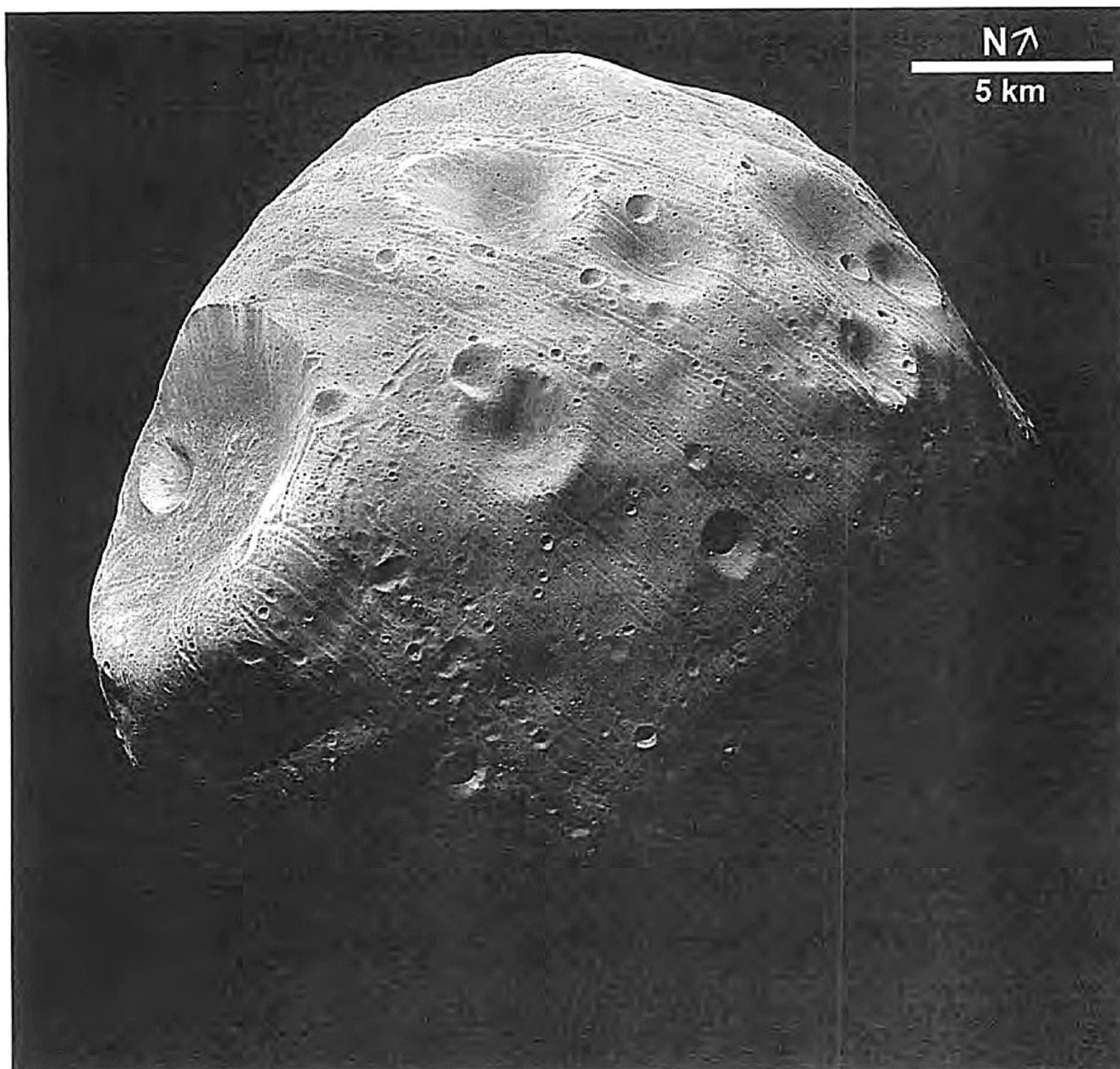
<sup>1</sup> G. Plafker, *loc. cit.*

<sup>2</sup> J. F. Dumont, "Neotectonics of the Subandes-Brazilian Craton Boundary Using Geomorphological Data: The Marañ and Beni Basins," *Tectonophysics* (June 1996), pp. 137-151.

<sup>3</sup> J. Gonzales & A. Aydin, *loc. cit.*

<sup>4</sup> *Ibid.*; G. Plafker, *loc. cit.*

<sup>5</sup> D. S. Allan J. B. Delair, *op. cit.*, p. 282.



**Phobos—displaying the parallel rows of impact craters that resulted in striated grooves in linear formations.**

(Photograph courtesy of NASA.)

William Napier, on the other hand, had no qualms about accepting a comet as the cause of the Younger Dryas episode. In his opinion, the responsible culprit was the meteoric swarm known as the Taurid Complex that resulted from the breakup of Comet Encke. Since, together with Victor Clube, he had been promoting this particular theory since the early 1980s,<sup>1</sup> he could not allow himself, and rightly so, out of the limelight. With a slight nod toward Firestone, he not only jumped back into the fray with a new paper on the subject, but saw fit to air

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<sup>1</sup> V. Clube & B. Napier, *The Cosmic Serpent* (London, 1982), *in toto*.



it on the Internet even before it was officially published by the *Monthly Notices of the Royal Astronomical Society*.<sup>1</sup>

Firestone himself, who also nodded slightly toward Clube and Napier,<sup>2</sup> was not all that certain what it was that caused the cooling of the Younger Dryas. In fact he seems to have been quite confused. By the end of 2009, he was hearkening back to the “recent near-Earth supernova” that supposedly ejected the impactor that was responsible for the event in question. But while he continued to proclaim this as a “possibility,” he was also of the opinion that “no such object of sufficient density is known to be emitted by a supernova.”<sup>3</sup> And although, on a different page of the same work, he does grant that a comet might have had a possible role in the affair, he couples this with the claim that the “distribution of markers is consistent with the outburst of a meteorite.”<sup>4</sup> Confusion is then added to an already confused subject when he informs us that the “characteristics” associated with the impact markers “are *inconsistent* with known meteorites.”<sup>5</sup> In the end, he refers to the impactor merely as an “object,” while admitting that its nature “remains a mystery.” Worse still, he then confesses that “any estimate for the probability” of the event itself remains “purely speculative.”<sup>6</sup>

## COSMIC RUBBLE

Comets, meteorites, asteroids—as if any of it matters since, in effect, there happens to be no difference between one and the other.

That comets only differ from asteroids “in the form of their orbits” was offered as “a pretty strong probability” by Benjamin Marsh back in 1862.<sup>7</sup> And while some may think that we have learned a lot since then, in this respect present knowledge is not really that much different. As in other scientific matters, what really transpired was the burying of Marsh’s insight, only for it to be exhumed, without giving him proper credit, more than a century later. By 2004, John Brandt and Robert Chapman could report that: “It is now clear that there is much more of a family link between comets and asteroids than we thought 20 years ago.”<sup>8</sup> Comets and asteroids, to say nothing of meteorites,<sup>9</sup> it was then repeated, “may be more similar than astronomers thought.”<sup>10</sup> While “the study of asteroids and comets evolved largely as distinct disciplines,” Brandt and Chapman go on, “they have much in common and the demarcation between the two is not always clear.”<sup>11</sup> Asteroid 4015, among others, has been

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<sup>1</sup> W. M. Napier, “Palaeolithic Extinctions and the Taurid Complex,” *arXiv:1003.0744.v1* (March 3, 2010).

<sup>2</sup> R. B. Firestone, *op. cit.*, p. 15.

<sup>3</sup> *Ibid.*, p. 11.

<sup>4</sup> *Ibid.*, p. 13.

<sup>5</sup> *Ibid.*, p. 2 (emphasis added).

<sup>6</sup> *Ibid.*, p. 18.

<sup>7</sup> B. V. Marsh, “The Distinguishing Features of Comets Considered as Phases of an Electrical Discharge Resulting from Eccentricity of Orbit,” *American Journal of Science* (May 1862), p. 99.

<sup>8</sup> J. C. Brandt & R. Chapman, *Introduction to Comets* (Cambridge, 2004), p. vii.

<sup>9</sup> S. Koppes, “Cosmochemists Share Results of Cometary Dust Analysis,” *spacedaily.com* (January 28, 2009).

<sup>10</sup> D. Pendick, “Surprises from Comet Wild 2,” *Astronomy* (May 2008), p. 23.

<sup>11</sup> J. C. Brandt & R. Chapman, *op. cit.*, p. 282.



**Halley's Comet.**  
(Photograph courtesy of NASA.)

described as “a marvelous example” of a comet “posing as an asteroid.”<sup>1</sup> Valid arguments have been presented “showing that comets can dynamically evolve into asteroidal orbits.”<sup>2</sup>

It is not, however, merely a matter of orbits. With the advent of better astronomical imaging, it became clear that the very structure of the bodies in question were no different from one another. In fact, it is now clear there *is* no “other.”

One thing that has been learned for certain is that comets are much more solid than had previously been believed. This was indicated by a pass of Halley's Comet when analysis of its core proved it to be much more substantive than had formerly been theorized.<sup>3</sup> All of which was later vindicated by the samples collected from Comet Wild 2 by NASA's Stardust mission,<sup>4</sup> and much more so by the images returned by that same spacecraft which showed the rocky nucleus of the comet in sharp detail.<sup>5</sup> Not only is Wild's surface solid, it is also pock-

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<sup>1</sup> *Ibid.*, p. 285.

<sup>2</sup> *Ibid.*, p. 282.

<sup>3</sup> P. James, *The Sunken Kingdom* (London, 1995), p. 168.

<sup>4</sup> “Comets Throw Light on Solar System's Beginnings,” *sciencedaily.com* (September 8, 2008).

<sup>5</sup> See, for instance, F. Reddy, “The Year in Astronomy,” *Astronomy* (January 2005), p. 35; K. A. Svitil, “NASA Takes a Wild Comet Ride,” *Discover* (January 2005), p. 57; J. Shibley, “Deep Impact Delivers a Hit,” in “Explore the Universe,” *Astronomy* (February 2005, Special Issue), p. 33.

marked with pits and craters much like the best of asteroids,<sup>1</sup> as images of the one named Eros clearly showed.<sup>2</sup> So, likewise, with the pictures of comets Borrelly and Tempel 1 that were respectively taken by the spacecrafts Deep Space 1 and Deep Impact.<sup>3</sup>

Surprising as all that seemed to most astronomers,<sup>4</sup> which is surprising in itself, the cratered surface that came to light in cometary nuclei had been predicted by Ralph Juergens and Earl Milton decades earlier. “When a spacecraft finally achieves a rendezvous with one of the comets,” Milton foretold in 1980, “scientists are going to be surprised to find a surface pitted like that of the Moon, Mars, or Mercury.”<sup>5</sup>

Yet, even then, there were those who could not stomach the realization that comets could themselves be impacted without being shattered. Thus cometary craters were at first referred to as being merely “crater-like,”<sup>6</sup> described as “enigmatic circular features,”<sup>7</sup> and judged rather doubtful of being due to impacts.<sup>8</sup> But in the end, not only did the craters win out, no one could contest the solidity of what had formerly been considered fluffy snowballs. Even rocky Chiron, with a diameter of 124-plus miles, who some consider an escaped satellite of Neptune,<sup>9</sup> has now been classed as a comet in disguise.<sup>10</sup>



**The cratered nucleus of Comet Wild 2.**  
(Photograph courtesy of NASA.)

“Extensive observational evidence firmly establishes Chiron as a comet...Chiron is the first discovered member of the Centaurs, objects that travel in eccentric orbits in

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<sup>1</sup> J. Platt & D. Brown, “NASA Spacecraft Reveals Surprising Anatomy of a Comet,” *NASA News Release* (June 17, 2004).

<sup>2</sup> D. Tytell, “Whole Lotta Shakin’ Goin’ On,” *Sky & Telescope* (April 2005), p. 19; A. E. Rubin, “What Heated the Asteroids?” *Scientific American* (May 2005), p. 83.

<sup>3</sup> J. Shibley, *op. cit.*, p. 30; D. Tytell, “Deep Impact Revisited,” *Sky & Telescope* (December 2005), p. 16.

<sup>4</sup> See here, for instance, S. Clark, “Comet Tails of the Unexpected,” *NewScientist.com* (September 9, 2005), p. 2.

<sup>5</sup> E. R. Milton, “Glimpses of an Electrical Cosmos,” as quoted by W. Thornhill & D. Talbott, *The Electric Universe* (Portland, Oregon, 2007), p. 100.

<sup>6</sup> D. Tytell, “Deep Impact’s Hammer Throw,” *Sky & Telescope* (October 2005), p. 35.

<sup>7</sup> *Ibid.*, p. 36.

<sup>8</sup> S. Clark, *op. cit.*, p. 3.

<sup>9</sup> D. H. Levy, “Pluto’s New Little Cousin,” *Sky & Telescope* (February 2003), p. 92.

<sup>10</sup> W. Thornhill & D. Talbott, *op. cit.*, pp. 86, 197.



The asteroid Eros.  
(Photograph courtesy of NASA.)

the outer solar system. These are catalogued as asteroids, but most would probably become comets if sent into the *inner* solar system.”<sup>1</sup>

That comets can masquerade as asteroids and vice versa eventually became something of a common declaration.<sup>2</sup> What this has led to is a confession by some that “comets are defying all attempts to understand them.”<sup>3</sup> The “asteroid-comet distinction,” it has been wittily argued, “can be regarded as securely blurred.”<sup>4</sup>

“Apart from the diehards,” wrote Peter James, “it is now increasingly accepted that the ‘dirty snowball’ went much too far in minimizing the solid nature of comets and hence the dangers they represent.”<sup>5</sup> Even Whipple, according to James, finally “dropped” the dirty snowball model he had originated.<sup>6</sup>

Unfortunately, diehards *do* die hard, and the dirty snowball theory continued to be spouted while this work was being written,<sup>7</sup> even by those who favored the Clovis Comet scenario,<sup>8</sup> as well as those who stressed the similarity between meteorites and comets.<sup>9</sup> All this despite the fact that ice or snow, not to say water, has not been found to be the main constituent of cometary bodies.<sup>10</sup> Craters—yes; but snow or ice is only notable in comets by its absence.<sup>11</sup>

Although not everyone agrees, most asteroids are now known to be the wreckage of once larger bodies.<sup>12</sup> Were one to concentrate all the millions of asteroids that reside in the belt be-

<sup>1</sup> J. C. Brandt & R. Chapman, *op. cit.*, p. 284 (emphasis added).

<sup>2</sup> J. Hsu, “Comets Disguised as Asteroids,” *space.com* (September 8, 2008).

<sup>3</sup> S. Clark, *loc. cit.*

<sup>4</sup> J. C. Brandt & R. Chapman, *loc. cit.*

<sup>5</sup> P. James, *loc. cit.*

<sup>6</sup> *Ibid.*

<sup>7</sup> Sources are too numerous to reference here, but see the following and below: “Space Shuttle Science Shows How 1908 Tunguska Explosion was Caused by a Comet,” *sciencedaily.com* (June 25, 2009).

<sup>8</sup> F. Largent, *op. cit.*, p. 25.

<sup>9</sup> S. Koppes, *loc. cit.*

<sup>10</sup> Again, sources are too numerous, but check D. J. Eicher, “Stardust Turns the Table on Comet Formation,” *Astronomy* (April 2007), p. 18; D. Pendick, “Spitzer Peeks Inside Comet,” *Astronomy* (February 2009), p. 26.

<sup>11</sup> J. C. Brandt & R. Chapman, *op. cit.*, p. 238.

<sup>12</sup> L. Layton, “New Asteroid Type Found?” *Astronomy* (December 2007), p. 29; but see also *ibid.*, p. 287.



tween Jupiter and Mars, they would end up forming a mass smaller than the Moon.<sup>1</sup> Most meteorites, on the other hand, are now recognized as being the mere fragments produced by the collisions of said asteroids.<sup>2</sup> All of which not only turns comets, asteroids, and meteorites into siblings, it also classes all three objects as cosmic rubble.

In some cases, astronomers were no longer even sure whether to classify certain bodies as being one or the other. The distinction finally boiled down to whether a body can be seen spouting a tail.<sup>3</sup> “When astronomers think of comets, they envision tail-spewing icy bodies plunging in from the outer solar system.”<sup>4</sup> Setting aside the obstinate description of them being “icy,” what can be said about cometary tails in this respect?



The nucleus of Comet Tempel 1  
(Photograph courtesy of NASA.)

## THE ELECTRIC MILIEU

To begin with, comets are not the only cosmic bodies that are capable of spouting tails. Asteroids, too, have been known to exhibit such appendages, as actual photographs have demonstrated.<sup>5</sup> Even planets outside our Solar System have a tendency to form gigantic comet-like tails.<sup>6</sup> For that matter, so do stars, as the one dubbed Mira clearly shows.<sup>7</sup> Heck—never mind stars; an entire galaxy has been discovered dragging a “cometary” tail behind it.<sup>8</sup>

The cause behind the cultivation of such tails was also forwarded back in 1862 by the same Benjamin Marsh who had surmised that comets only differ from asteroids in the form of their orbits.<sup>9</sup> Predating the discoveries of the controversial Kristian Birkeland by a few decades, Marsh correctly realized that, together with auroral streamers, cometary tails are nothing

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<sup>1</sup> A. Lawler, “What to do Before the Asteroid Strikes,” *Discover* (November 2007), p. 63.

<sup>2</sup> M. McChain, “Study Explains Meteorite Origins,” *Astronomy* (December 2008), p. 22.

<sup>3</sup> J. C. Brandt & R. Chapman, *op. cit.*, p. 286.

<sup>4</sup> S. Cull, “Main-Belt Comets,” *Sky & Telescope* (August 2006), p. 20.

<sup>5</sup> *New Scientist* (September 12, 1992), p. 17.

<sup>6</sup> T. Ferris, *op. cit.*, p. 91.

<sup>7</sup> D. Pendick, “Ultraviolet Images Reveal Mira’s Tail,” *Astronomy* (December 2007), p. 24.

<sup>8</sup> “Galaxy Sports Vast Comet-Like Tail,” *space.com* (September 20, 2007).

<sup>9</sup> B. V. Marsh, *loc. cit.*



The star named Mira displaying its "cometary" tail.  
(Photograph courtesy of NASA,)

but a cosmic form of electrical discharges.<sup>1</sup> But, as with Birkeland's own discoveries, Marsh's disclosures were also relegated to the scientific dustbin until retrieved by plasma physicists later in time.

The subject, however, was not entirely forgotten even though the torch was only carried by a few. One of these was Wilhelm Foerster, director of the Berlin Observatory, who, at the end of the nineteenth century, inaugurated a research program by asking Eugen Goldstein to look into the nature of electricity in space. In more than one of his many experiments, Goldstein succeeded in electrically duplicating cometary tails in gas discharge tubes.<sup>2</sup> But even that failed to impress most of his peers. When Foerster asked Hermann Vogel, the director of the Astrophysical Observatory in Potsdam, to make use of his protégé's services, Vogel replied that "he could not imagine what Goldstein's experiments had to do with astrophysics."<sup>3</sup> But even then, the electrical nature of comets continued to be explored by various astronomers into the twenty-first century. Electrical power as an alternative source of stellar, let alone cometary, luminosity is now seriously being discussed by mainstream astrophysicists,<sup>4</sup> so that the electrical field of the Sun need no longer be viewed as anomalous.

But why do comets spout tails while the majority of asteroids do not? As with all cosmic bodies, comets are now known to be enveloped within a plasma sheath, visible as their coma, that limits the extent of their electric field.<sup>5</sup> As has been noted by those immersed in plasma

<sup>1</sup> *Ibid.*, pp. 95 ff.

<sup>2</sup> M. Hedenus, "Eugen Goldstein and his Laboratory Work at Berlin University," *Astronomische Nachrichten* (December 2002), pp. 567-568.

<sup>3</sup> *Ibid.*, p. 568.

<sup>4</sup> See, for instance, K. Wu, *et al.*, "An Electrically Powered Binary Star?" *Monthly Notices of the Royal Astronomical Society*, 331:1 (March 2002), pp. 221-227.

<sup>5</sup> See, here, W. Thornhill, *Electric Universe Presentation* (Amsterdam, May 2005), p. 53.

physics, the free electrons within such sheaths “are very effective carriers of electric current.”<sup>1</sup> But such currents are also reliant on the electrical potential of the spatial environment through which they move.

A comet is thus a body—just like asteroids or meteorites—the electric charge of which reaches an imbalance as it moves deeper within the Sun’s own field, causing it to electrically discharge, making its sheath to glow in what we see as its coma and luminous tail.<sup>2</sup> It does not therefore matter what one calls terrestrial impactors or their shrapnel. It all comes down to cosmic rubble.

Even so, too many things have been left in darkened corners by those who have been pushing the impact theory to account for the onset of the Younger Dryas. Tongue only slightly held in cheek, let us bring them back to light.

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<sup>1</sup> *Idem*, with D. Talbott, “The Need for a New Cosmology,” *AEON VII:1* (September 2006), p. 24.

<sup>2</sup> *Idem*, *The Electric Comet* (Traverse City, Michigan, June 2006), p. 6.

# Chapter 9

## Resetting the Record

### CONFLAGRATIONS

**A**lthough it might sound trite, in order for forests to have been set on fire at the onset of the Younger Dryas, there had to have been forests in the first place. Those who have claimed it was the cold that was really responsible for the fires<sup>1</sup> neglected to explain how forests could have thrived in the glacial conditions they advocate. One thing they were however right about is that it's "highly questionable" that an impact over North America could have caused wide-ranging forest fires in northwest Europe.<sup>2</sup> But, even then, they did end up minimizing the occurrence by failing to include the vast number of similar infernos that took place around the same time in the rest of the world both north and south of the equator.<sup>3</sup> And while we're at it, neither will it do to blame this world-wide blaze on the dryness of the land. Fair enough, the previous Allerød period did dry out the land, but, as already noted, the very heat involved would have also increased evaporation from Earth's oceans which would have led to a prolonged series of rainfalls some of which fell on the very lands the forests of which went up in flames.<sup>4</sup> What we instead proclaim is that a severe sudden heat wave set Earth's forests on fire, while the following global downpours, to say nothing of the encroaching sea waves, aided in dowsing out the conflagrations.

That the sudden heat wave that caused these world-wide fires was released by proto-Saturn's flare-up hardly needs re-stressing at this point in our scheme. Forests in the northern hemisphere would have suffered the worst since the heat from the flare-up would have impacted them directly from Earth's north polar height. Those in the southern hemisphere would have been incinerated through the heat reflected off the inner surface of the proto-Saturnian system's enveloping plasmasphere.<sup>5</sup> Added to that would have been the frictional heat produced by Earth's rotational braking due to proto-Saturn's very flare,<sup>6</sup> and this, too, would have induced incineration. The charcoal-containing black mats that have raised so much controversy need no further elucidation.

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<sup>1</sup> T. van der Hammen & B. van Geel, "Geo(Im)pulse: Charcoal in Soils of the Allerød-Younger Dryas Transition Were the Result of Natural Fires and Not Necessarily the Effect of an Extra-Terrestrial Impact," *Netherlands Journal of Geosciences* (December 2008), p. 359.

<sup>2</sup> *Ibid.*

<sup>3</sup> J. B. Kloosterman, "The Usselo Horizon: A Worldwide Charcoal-Rich Layer of Allerød Age," *Proceedings of the Conference: New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man* (Bergamo, 2002), pp. 152, 153.

<sup>4</sup> P. Gwin, "Lost Tribes of the Green Sahara," *National Geographic* (September 2008), p. 129.

<sup>5</sup> See *Flare Star*, pp. 370 ff.

<sup>6</sup> *Ibid.*, pp. 372 ff.



physics, the free electrons within such sheaths “are very effective carriers of electric current.”<sup>1</sup> But such currents are also reliant on the electrical potential of the spatial environment through which they move.

A comet is thus a body—just like asteroids or meteorites—the electric charge of which reaches an imbalance as it moves deeper within the Sun’s own field, causing it to electrically discharge, making its sheath to glow in what we see as its coma and luminous tail.<sup>2</sup> It does not therefore matter what one calls terrestrial impactors or their shrapnel. It all comes down to cosmic rubble.

Even so, too many things have been left in darkened corners by those who have been pushing the impact theory to account for the onset of the Younger Dryas. Tongue only slightly held in cheek, let us bring them back to light.

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<sup>1</sup> *Idem*, with D. Talbott, “The Need for a New Cosmology,” *AEON VII:1* (September 2006), p. 24.

<sup>2</sup> *Idem*, *The Electric Comet* (Traverse City, Michigan, June 2006), p. 6.

Richard Firestone and Allen West had been closer to the truth in their endorsement of the supernova theory that was originally proposed by the now neglected William Topping. As noted, the main evidence for this assumption came from the exotic materials that have been discovered in association with the much discussed Clovis sites, as also elsewhere. On examination, this composition was found to be similar to that contained in some of the lunar rocks recovered by the Apollo astronauts.<sup>1</sup> This indicates that our Moon, which we claim was not yet orbiting Earth, was also bombarded by the same material, which means that, wherever the Moon had been situated, it could not have been far off. What makes this even more significant is that the potassium-40 that came to light in association with the Clovis sites was found to be “much more abundant” than that in the Solar System while being closer to what can be produced by supernovae.<sup>2</sup>

The problem that this raised was the specific supernova’s 250 light-year distance, which is why the culpability of the event was shifted to its theorized cometary offspring which would have taken the required 28,000 years to bridge the gap. In our scheme, with proto-Saturn much closer to Earth, the initial cause can be dated to the very time of the climatic onset it instigated, with the exotic materials in question having been released through its sub-stellar flare.

## CONCENTRATIONS

What, then, of the claimed point of impact over North America’s Great Lakes region? The main reason behind this setting is that one of the highest concentration of nanodiamonds happens to occur at a site in Eastern Michigan.<sup>3</sup> But there are many other places in which nanodiamonds have been found in massive quantities. In a hunt for evidence to bolster the very cometary strike that was being proposed, Douglas Kennet, father of the previously mentioned James Kennet, plus colleagues from various institutions and even private research companies, concentrated their efforts on the Channel Islands off California’s coast—as if they did not already know they would find what they were looking for at that very locality. Not surprisingly, nanodiamonds were retrieved in quantity from the sediments of Arlington Canyon on the island of Santa Rosa. These diamonds were moreover combined with layers of soot, linking them to the very incinerations we have been discussing, even though, under normal conditions, the association of soot with diamonds is considered to be “rare in the geological record.”<sup>4</sup> *Billions* of these diamonds have come to light in at least six North American locations.<sup>5</sup> Others have been retrieved in Ice Age drift deposits in Russia, Poland, Germany, France, and

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<sup>1</sup> D. Krotz, “Supernova Explosion May Have Caused Mammoth Extinction,” Lawrence Berkeley Laboratory Research News at [lbl.gov/Science-Articles/Archive/NSD](http://lbl.gov/Science-Articles/Archive/NSD) (September 23, 2005), p. 1.

<sup>2</sup> *Ibid.*, p. 2.

<sup>3</sup> R. Mitchum, “Scientists Say Comet Killed Off Mammoths, Saber-Toothed Tigers,” *physorg.com* (January 2, 2009).

<sup>4</sup> G. Gallessich, “California’s Channel Islands Hold Evidence of Clovis-Age Comets,” *University of Oregon News Release* (July 20, 2009).

<sup>5</sup> *Ibid.*

even the Near East.<sup>1</sup> There is nothing in all this that restricts the dispersal of the nanodiamonds from an atmospheric locality over North America's Great Lakes. But it does seem to narrow their extent to Earth's northern hemisphere which, again, is in keeping with our scheme. As we have already noted, nanodiamonds created around distant stars can be transported by cosmic debris and dumped on planets including Earth.<sup>2</sup> Such diamonds have been recovered from meteorites—such as the one that crashed into frozen Tagish Lake in northern Canada<sup>3</sup>—which are believed to have been born in supernovae.<sup>4</sup> And if supernovae, then also proto-Saturn's closer flare-up where meteoric transport is not even called for.

## EXTERMINATIONS

That woolly mammoths and other members of the Pleistocene fauna met their end through a cometary impact had been proposed as early as 1953 by Allan Kelly and Frank Dachille in a work that, like ours, also took the mytho-historical record into consideration.<sup>5</sup> But, like William Topping, they, too, were shoved aside. Those not in favor of cosmic impacts did most of the shoving, blaming most mass extinctions on "gradual" climatic changes, especially following the more recent cometary theory proposed by West and company.<sup>6</sup> By the year 2006, the dispute between palaeontologists was reported to have turned into "a full-scale academic brawl" or, as Peter Ward from the University of Washington in Seattle aptly phrased it, "a shoot-out at the OK Corral."<sup>7</sup> In an attempt to break the deadlock, the geophysicist Luann Becker and her colleagues from the University of California at Santa Barbara began searching for Younger Dryas clues that would connect the posited cometary impact to the extermination of the mammoths.<sup>8</sup>

It was around the same time that West and Firestone discovered the unmistakable cosmic scars on the mammoth tusks and bison skull discussed in our previous chapter. It might not matter much, but it should be pointed out that the tusks and skull in question did not come from a contamination-controlled museum or laboratory, but from a commercial shop in Arizona dealing in such artifacts. And even then, only those eight tusks plus the one bison skull exhibited the tell-tale signs in a search that included thousands of such items. Worst of all, the peppered tusks were actually dated to somewhere between 34,000 and 35,000 years ago, some 20,000 years older than the supposed cometary blast.<sup>9</sup>

One possibility that can account for this dating inconsistency was then forwarded. Since most mammoth remains are usually found sticking out of the permafrost or eroding out of riv-

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<sup>1</sup> D. S. Allan & J. B. Delair, "Scientific Evidence for a Major World Catastrophe About 11,500 Years Ago: A Preliminary Selection," *Chronology and Catastrophism Review* XVII (1995), p. 45.

<sup>2</sup> R. A. Kerr, "Did the Mammoth Slayer Leave a Diamond Calling Card?" *Science* (January 2, 2009), p. 26.

<sup>3</sup> R. Boswell, "Massive Comet Shower May Have Caused Cool-Down Era," *The Vancouver Sun* (April 2, 2010), p. B3.

<sup>4</sup> *Flare Star*, pp. 429 ff.; see also p.106, this very volume.

<sup>5</sup> A. O. Kelly & F. Dachille, *Target: Earth* (N. Y., 1953), *in toto*.

<sup>6</sup> Z. Merali, "Climate Blames for Mass Extinctions," *New Scientist* (April 1-7, 2006), p. 18.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> J. Amos, "Great Beasts Peppered From Space," *news.bbc.co.uk* (December 11, 2007).

er banks, the tusks in question could have belonged to long-dead animals. They could then have been cosmically peppered at a later time while they were thawing out of the ground. Both West and Firestone believe that “there must still be peppered tusks out there” that can be dated to that telling 13,000-year mark.<sup>1</sup> That, however, does not comply with the bison skull which showed that the animal had, in fact, survived the scarring event whenever that might have been.<sup>2</sup>

None of this evidence is detrimental to our particular scheme. In fact, the peppering was first said to have come directly from the supernova rather than its cometary offspring.<sup>3</sup> And that, again, would have been closer to the truth. In our own case, it would have been unlikely that cosmic particles from previous proto-Saturnian flares would not have scarred such exposed ivory.<sup>4</sup> Nor does the “single direction” from which the particles struck the tusks have any meaning. Since such ivory would have lain lifeless on the thawing ground, it would not have mattered from which direction the particles would have come since it would really have depended on the position of the ivory rather than the bearing of the cosmic stream.

That said, it should also be noted that, despite some reports to the contrary, not all woolly mammoths are known to have been exterminated during the event under discussion.<sup>5</sup> Dwarf species of these beasts survived on an island in the Bering Sea up till 7,900 years ago.<sup>6</sup> Mammoth bones discovered in an area south of Arkhangelsk, Siberia, have been dated to 5,000 years before the present.<sup>7</sup> In Wrangell Island, in the North Pacific Ocean, an entire mammoth population survived until sometime between 3,800 and 3,500 years ago.<sup>8</sup> Nor were mammoths the only Pleistocene animals that survived beyond the period of the Younger Dryas. Various other fauna also made it through,<sup>9</sup> in some cases up to 5,000 years ago,<sup>10</sup> and even later.<sup>11</sup>

Needless to say, individual beasts would have died on and off throughout the existence of their species the way modern ones continue to do at present. So keep in mind that all dates derived from individual specimens can at best tell us when that particular animal died, and not when the species it belonged to became extinct. On the other hand, a beast that registers younger than a given date for the extinction of its species shows that particular extinction date to be in error.

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*

<sup>3</sup> D. Krotz, *op. cit.*, pp. 1, 2.

<sup>4</sup> See *Primordial Star* pp. 70 ff. for previous proto-Saturnian flares (although the perusal of that entire work is recommended for a full disclosure of the subject).

<sup>5</sup> “Extinction Delayed for Mammoths on Bering Sea Island,” *The Province* (June 23, 2004), p. A13.

<sup>6</sup> *Ibid.*; *Science Frontiers* (September-October 2004), p. 3.

<sup>7</sup> *The Egyptian Gazette* (September 13, 1984) as quoted in *SIS Workshop*, Vol. 6, No. 2 (August 1985), p. 35.

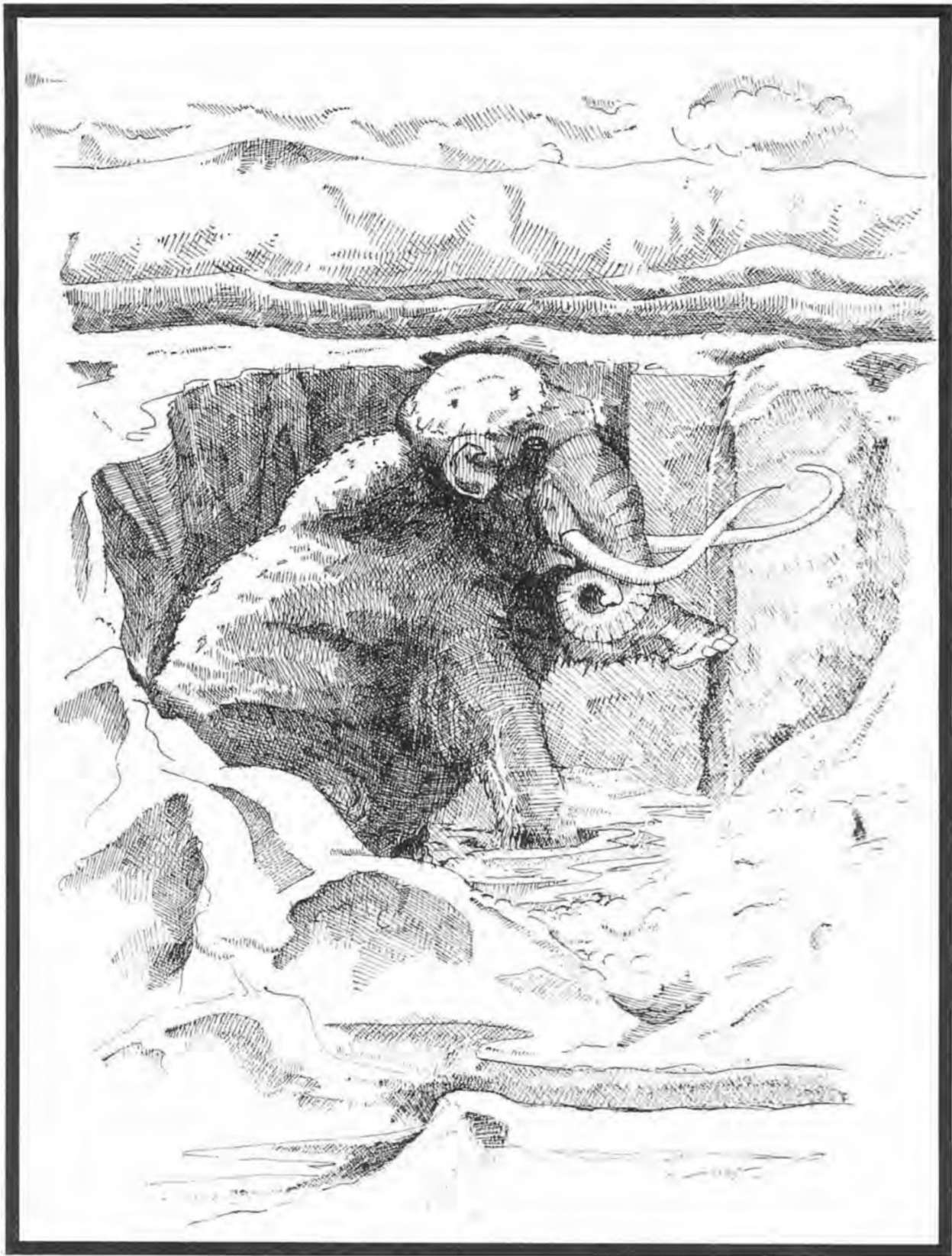
<sup>8</sup> B. Bower, “Dwarf Mammoths Outlive Ice Age,” *Science News* (March 27, 1993), p. 197; R. Stone, “The Cold Zone,” *Discover* (February 2001), p. 63.

<sup>9</sup> J. Dennings, *Prehistory of North America* (N. Y., 1974), p. 68; Kurt W. Marek (writing under the name C. W. Ceram), *The First American* (N. Y., 1971), p. 269.

<sup>10</sup> L. Krishtalka, *Dinosaur Plots & Other Intrigues in Natural History* (N. Y., 1989), p. 206.

<sup>11</sup> N. K. Vereschagin & G. F. Baryshnikov, “Quaternary Mammalian Extinctions in Northern Eurasia,” in P. S. Martin & R. G. Klein (Eds.), *Quaternary Extinctions* (Tucson, Arizona, 1984), p. 503.





**Mammoth remains, like that of the specimen shown above, are usually found thawing out of the permafrost.**

**(Illustration by Joe Ferrante.)**

## SUBMERGENCE

Cosmic peppering was not the only cause of faunal extermination during the time in question. Rising water levels also took their toll on life. The Chippewa Amerinds of western Ontario still remember the disastrous rise in water levels in both lakes and rivers due to the rapid melting of the ice which culminated in the near extinction of life.<sup>1</sup> The flooding of the land due to the melting of glacial ice is also recounted by the Hopi,<sup>2</sup> as well as the Slavey.<sup>3</sup> Moreover, this flooding was in addition to the incursion of the world's oceans over the land that was brought about by the already mentioned terrestrial braking. And while we have already covered this worldwide inundation both in this and in a previous volume,<sup>4</sup> new evidence keeps piling up.

There is so much that rising waters from the melting glaciers have covered that worldwide undersea exploration will take decades, if not centuries, to record it all in detail. "Submerged beneath the waves," it has recently been reported, "lies a large part of human history."<sup>5</sup> In some areas, especially along coasts, the rising seas have actually managed to preserve what they had drowned. "We have a lot to learn by looking under-water," the archaeologist Geoff Bailey stated. "There are many sites to discover and examine, and preservation is in fact better than on land."<sup>6</sup>

All of which has allowed Bailey and colleagues to inaugurate the European research network known as the Submerged Prehistoric Landscapes and Archaeology of the Continental Shelf, or SPLASH for short, which devotes itself to the collection of past submarine data, the mapping of submerged coastal regions, physical site investigations, and artifact retrieval through the use of submersibles and deep-sea divers.

Close to 3.2 million square kilometers of Europe's continental shelf, which is almost 40 per cent of the continent's entire land mass, had lain uncovered during Earth's past glacial periods. The submergence of these coastal regions played a major role in the dispersal of Europe's Paleolithic inhabitants, to say nothing of the extinction of various life forms. And that's just Europe.

While concentrating their efforts off the coast of England, Bailey and his team have also conducted preliminary explorations along the shores near Gibraltar and even the southern end of the Red Sea. What has so far been retrieved—wooden items, woven fibers, various insects, plant remains, pottery, some of which contained remains of food, human bones, mammoth skulls, plus other "organic material" with traces of DNA<sup>7</sup>—is much less than the proverbial drop in a very big container. As I write this, the work has only just begun.

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<sup>1</sup> V. Deloria, Jr., "Catastrophism and Planetary History," *KRONOS* III:4 (Summer 1978), p. 49.

<sup>2</sup> F. Waters, *Book of the Hopi* (N. Y., 1974), p. 20.

<sup>3</sup> S. Eddy, *Native American Myths* (London, 2001), p. 99.

<sup>4</sup> *Flare Star*, pp. 391-413.

<sup>5</sup> D. Venton, "Feature—Grid Makes a SPLASH in Underwater Archaeology," *International Science Grid This Week* at isgtw.org (*July 1, 2009*), p. 1.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

What also needs to be pointed out is the improbability of such worldwide inundation to have been caused by a comet disintegrating high above North America. Such a localized blast would hardly have caused Earth to curb its rotational speed which, among other disasters, resulted in the immense friction between its crustal layers that led to the global volcanism, earthquakes, and diastrophism that we discussed in detail in a previous work of this series.<sup>1</sup>

## CAUSE AND EFFECT

Would a cometary strike really have caused cold? According to Firestone, long-term “cooling effects” would have resulted from the impact due to the depletion of the ozone layer and the injection of pollution into the atmosphere in addition to “the shutdown of the North Atlantic thermohaline circulation.”<sup>2</sup> He might not yet have known that, as already noted, Susan Lozier had thrown the thermohaline circulation out of court.<sup>3</sup> As for pollution, we will have much to clarify in the next chapter of this very work. What is really amazing, though, is that the same and/or similar sort of evidence has been utilized by different parties to uphold conflicting theories. Those who continue to blame a cosmic impact for the direct extinction of the dinosaurs are of two minds. One group maintains that the blast would have dramatically cooled the climate,<sup>4</sup> while others are just as vehement in claiming that a great warming event was the outcome of the blast.<sup>5</sup>

There is, however, more than all that to consider because, after all, the Younger Dryas is not the only re-freezing episode that sliced through the interstadials toward the end of the Pleistocene that has to be accounted for. How about the two previous Dryas events, those named the Oldest and the Older ones? Did comets also explode in Earth’s atmosphere to cause our world to re-enter a deep freeze environment at each of those sudden climatic reversals?

Fair enough, Firestone did attempt to take these earlier cooling episodes into account, but he waved them aside because “none [of them] were associated with major extinctions.”<sup>6</sup> It did not seem to dawn on him that *that*, too, cries out loud for a solution.

And even then, how about the re-warming interglacials that suddenly sliced through these re-freezing episodes, the Bølling and the Allerød? Were they also caused by cometary impacts? Can cometary impacts cause a succeeding series of alternating warming and cooling episodes? Or how far can one stretch a fiction?

It is not that our own hypothesis excludes cosmic impacts. On the contrary, we swear by them, even in association with the Younger Dryas—*but not as its direct cause*. As we had previously pointed out,<sup>7</sup> such impacts are bound to have taken place in conjunction with pro-

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<sup>1</sup> *Flare Star*, pp. 348 ff.

<sup>2</sup> R. B. Firestone, “The Case for the Younger Dryas Extraterrestrial Impact Event: Mammoth, Megafauna, and Clovis Extinction, 12,900 Years Ago,” *Journal of Cosmology*, Vol. 2 (November 2009), pp. 256-285, available at [journalofcosmology.com](http://journalofcosmology.com) (November 10, 2009), p. 14 of 21.

<sup>3</sup> M. Basgall, “Ocean Circulation Doesn’t Work as Expected,” *physorg.com* (May 13, 2009).

<sup>4</sup> See the “Monitor” section of *Chronology & Catastrophism Workshop* (2009:1), p. 24.

<sup>5</sup> *Ibid.*, p. 23.

<sup>6</sup> R. B. Firestone, *op. cit.*, p. 2.

<sup>7</sup> *Flare Star*, pp. 435 ff.

to-Saturn's outbursts, including the major flare-up that resulted from its capture by our present Sun. "Capture of a brown dwarf," according to Wallace Thornhill, "requires that the dim star accommodate to a new electrical environment within the plasma sheath of the Sun."<sup>1</sup> When that transpires, the brown dwarf "flares and ejects matter" including small debris.<sup>2</sup>

As we noted in our previous chapter, there are, *in the main*, two sets of crater orientations that have been etched on the terrestrial landscape by cosmic rubble in association with the Younger Dryas: northwest to southeast and northeast to southwest. Although, as William Prouty pointed out, these variations can be accounted for by Earth's rotation,<sup>3</sup> we have to admit that *that* is not enough. But when we add the additional motions involved in the event in question, these directional variations will not seem that much at odds. Among these we must definitely include proto-Saturn's own axial speed, since that is where we claim the rubble originated from, to which we shall have to add Earth's rotational braking and, as I aim to discuss in a forthcoming volume, the erratic wobbling it experienced due to the same event. In the end it has to be admitted that, northwest to southeast or northeast to southwest, the general direction was from the north as is to be expected in accordance with our scenario. But how old are these scars, really?

## THE BAYS' AGE

Back in 1933, the previously cited Frank Melton and William Schriever were of the opinion that the Carolina Bays were formed during the Pleistocene's glacial period.<sup>4</sup> It was not, however, surprising when certain critics disagreed with this by dating the formations way before the Ice Age.<sup>5</sup> The pendulum then swung back when Murray Buell placed the age of Jerome Bog, which is one of the peat-filled Bays, back into the late Pleistocene.<sup>6</sup>

Six years later, William Prouty could not do much better. Having been so specific about the various characteristics of the Carolina Bays, he could not be that precise about their age. The best he could do was that they were "younger than the youngest Pleistocene terrace" of the United States' Atlantic coastal plain, and "older than at least one of the more recent marine transgressions."<sup>7</sup> This was not all that helpful especially when, on a different page, he had it that the Bays "are found on *all* Pleistocene terraces from the *oldest* along the inner edge of the Coastal Plain to the Pamlico, which is the *youngest* and the lowest terrace."<sup>8</sup> He is also somewhat confusing when he tells us that the Bays' "condition of preservation...seems to in-

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<sup>1</sup> W. Thornhill, as quoted by S. Smith, "Multi-Colored Centaurs," picture of the day at *thunderbolts.info* (March 17, 2009), p.2.

<sup>2</sup> *Ibid.*

<sup>3</sup> W. F. Prouty, "Carolina Bays and their Origin," *Bulletin of the Geological Society of America* (February 1952), pp. 190, 214

<sup>4</sup> F. A. Melton & W. Schriever, "The Carolina 'Bays'—Are They Meteorite Scars?" *Journal of Geology*, Vol. 41, No. 1 (January-February, 1933), p. 56.

<sup>5</sup> D. Johnson, *The Origin of the Carolina Bays* (N. Y., 1942), p. 93.

<sup>6</sup> M. F. Buell, "The Age of Jerome Bog," *Science*, Vol. 103 (1946), pp. 14-15.

<sup>7</sup> W. F. Prouty, *op. cit.*, p. 167.

<sup>8</sup> *Ibid.*, p. 191 (emphasis added).



dicating that they are all of about the same age,”<sup>1</sup> which he actually claims they should be,<sup>2</sup> while he then adds that “most” of the them are “associated with other bays of slightly *different* age.”<sup>3</sup> His final verdict was that the Bays “cannot be older than late Pleistocene,”<sup>4</sup> which is no improvement over the conclusions of his predecessors.

Disagreement remained rampant—not only about the Bays’ age, but also in relation to their formation. There were some who actually believed that the Bays were scoured by past prevailing winds,<sup>5</sup> as others had assumed for the oriented lakes of the Alaskan tundra,<sup>6</sup> which have also been dated to the late Pleistocene.<sup>7</sup> But, pendulums being what they are, an age pointing back to the Pleistocene epoch was finally derived through the controversial radiocarbon dating method,<sup>8</sup> which seems to be the best that can be achieved in relation to these formations.

By mid-2007, hesitancy seems to have again set in. In illustrating an article by Heather Pringle, *New Scientist* published a map showing the localities of the evidential material for the “comet” that was said to have “exploded over North America.” Each one of these localities included a derived date between 12,400 and 13,500 years ago. Perhaps in order to play it safe, however, the Carolina Bays are pinpointed without a supplied date.<sup>9</sup>

While the above does not contradict the time given for the onset of the Younger Dryas, it falls somewhat short of validating it. What, then, can be said for the date that has been derived for this event?

### THE RADIOCARBON DATING GAME

As we have elsewhere noted, various dates have been supplied through the years for the end of the Pleistocene Ice Age. These have ranged from 30,000 to 7,000 years ago.<sup>10</sup> In sifting through the evidence presented within this 23,000-year range, as well as other clues pertaining

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<sup>1</sup> *Ibid.*, p. 174.

<sup>2</sup> *Ibid.*, p. 191.

<sup>3</sup> *Ibid.*, p. 174 (emphasis added).

<sup>4</sup> *Ibid.*, p. 192.

<sup>5</sup> H. F. Garner, *The Origin of Landscapes* (Oxford, 1974), pp. 436-438.

<sup>6</sup> P. A. Zahl, “Portrait of a Fierce and Fragile Land,” *National Geographic* (March 1972), p. 303.

<sup>7</sup> C. E. Carson & K. M. Hussey, “The Oriented Lakes of Arctic Alaska,” *The Journal of Geology*, Vol. 57 (1962), pp. 417-439.

<sup>8</sup> T. Palmer, “The Late Pleistocene Extinctions: No Evidence for Plato’s Atlantis,” *Chronology & Catastrophism Workshop* (1982:2), p. 13.

<sup>9</sup> H. Pringle, “Firestorm From Space Wiped Out Prehistoric Americans,” *New Scientist* (May 26-June 1, 2007), p. 9.

<sup>10</sup> See, for instance, F. Johnson, in W. F. Libby, *Radiocarbon Dating* (1952), p. 105; W. Chorlton, *Ice Ages* (Alexandria, Virginia, 1983), p. 95; W. Immen, “Expert Believes Last Ice Age Ended 10,400 Years Ago,” *Globe & Mail* (May 27, 1983); S. Begley & L. Lief, “The Way We Were,” *Newsweek* (November 10, 1986), p. 62; S. Mewhinney, *Ice Cores and Common Sense* (no place of publication given, 1989), p. 5; *idem*, “Ice Cores and Common Sense,” *Catastrophism and Ancient History* XII: 2 (July 1990), pp. 117-128; D. S. Allan, & J. B. Delair, *Catalysm!* (Santa Fe, New Mexico, 1997), p. 16; “Recent Climate Changes,” *Chronology & Catastrophism Review* (1997:2), p. 41, in which original sources are cited; E. Dobb, “What Wiped Out the Dinosaurs,” *Discover* (June 2002), p. 39; R. A. Bindshchelder & C. R. Bentley, “On Thin Ice?” *Scientific American* (December 2002), p. 100.

to various related matters, we have accepted 10,000 years ago as a benchmark figure for proto-Saturn's flare-up and the end of the Age in question.<sup>1</sup> The continuing realization that kilometer-deep glaciers, like the one on Baffin Island, went through a rapid cataclysmic meltdown "about 9,500 years ago"<sup>2</sup> keeps us confident. But, as we have also seen, the tell-tale signature for the blast that supposedly brought the Clovis culture and the much-heralded woolly mammoths to their doom has been radiocarbon-dated to 13,000 years ago. Although in discussions of such ages a 3,000-year difference is not considered of much significance, we would rather not be faced with this discrepancy. We can, however, point to the fact that the *original* date derived from European peat bogs had indicated the onset of the Younger Dryas at 11,000 years before the present.<sup>3</sup> That date was then eclipsed by more recent ones derived from Greenland ice cores,<sup>4</sup> which have been accepted as showing the onset of this particular Dryas somewhere between 12,800 and 12,900 years ago,<sup>5</sup> usually rounded off to the aforementioned 13,000 years before the present.

On the other hand, dates derived from the European Alps in Switzerland do not conform with those derived in North America.<sup>6</sup> All of which rightly explains why Wallace Broecker could refer to the onset of the Younger dryas as having occurred "within the dating uncertainty" of this radiocarbon-derived sequence.<sup>7</sup>

If nothing else, glaciologists, as well as other ologists, should long have realized that the radiocarbon dates that have been derived for the period, and event, in question are in hopeless disarray. In some cases, individual tests conducted on samples from the same specimen resulted in different dates. Take, as an example, the tissue from the famous baby mammoth paleontologists have named Dima. Soviet laboratories supplied an age of 40,000 years, but only 26,000 when dated at a center in Pittsburgh, Pennsylvania.<sup>8</sup> Nor were these the only divergent dates supplied in relation to the same infant pachyderm.<sup>9</sup>

Of even greater importance to our present study is the fact that radiocarbon testing of the charcoal found in association with the Carolina Bays and various Clovis sites yielded highly improbable dates some of which were as low as 6,565 years before the present. Others were even worse, producing dates *hundreds of years in the future*.<sup>10</sup>

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<sup>1</sup> *Flare Star*, pp. 339-342.

<sup>2</sup> R. Boswell, "Cataclysmic Meltdown a Warning for the Future," *The Vancouver Sun* (June 23, 2009), p. B5.

<sup>3</sup> D. I. Benn, "Younger Dryas Stade," *encyclopedia.com* (June 13, 2009), p. 1.

<sup>4</sup> R. B. Alley, *et al.*, "Abrupt Accumulation Increase at the Younger Dryas Termination in the GISP2 Ice Core," *Nature* (April 8, 1993), pp. 527-529.

<sup>5</sup> D. I. Benn, *loc. cit.*; R. B. Alley, "The Younger Dryas Cold Interval as Viewed from Central Greenland," *Quaternary Science Reviews* (January 1, 2000), pp. 213-226.

<sup>6</sup> I. Schindewolf, "The Expansion of the Prominent Younger Dryas Glacier Re-Advance Across the Swiss Alps," *International Geological Congress* (Oslo, August 6-14, 2008), as given at [corm.gov.br/331GC/1345329.html](http://corm.gov.br/331GC/1345329.html) (June 13, 2009).

<sup>7</sup> W. S. Broecker, "What if the Conveyor Belt Were to Shut down? Reflections on a Possible Outcome of the Great Global Experiment," *GSA Today* (January 1999), p. 4.

<sup>8</sup> R. D. Guthrie, *Frozen Fauna of the Mammoth Steppe* (Chicago, 1990), pp. 9-10.

<sup>9</sup> *Ibid.*, pp. 24, 27.

<sup>10</sup> R. B. Firestone, *op. cit.*, pp. 11, 12.

There would be no point in asking which dates are correct and which are not. The only thing that came out of the situation was a power struggle fed by bickering by various authorities, which was nothing new. In fact, one of the greatest scientific debates, as Peter Ward acknowledged, has centered around the validity of radiocarbon dating.<sup>1</sup> “[M]any carbon-14 dates recovered during the early years of the method are in error,” disclosed Ward. “New methods have also called into question many dates produced more than 20 years ago [i.e., prior to 1977], *dates that are absolutely crucial in identifying the killer of the Ice Age fauna.*”<sup>2</sup>

Although he was referring to an entirely different time, the archaeologist Manfred Bietak was not speaking idly when he cautioned that “it seems wise not to mix historical with radiocarbon chronology.”<sup>3</sup> His advice was to use such dates “in opposition to each other” until such time when the “phenomenon of divergence” between them can be better understood.<sup>4</sup>

We could devote an entire multi-hundred-page volume to this subject alone, but it would not get us any closer to alleviating the problems involved in what has truly turned into a radiocarbon-dating roulette. Let us simply keep in mind that the radioactive decay of matter, on which all radiometric dating systems rely, has been found to vary under conditions which tend to alter the environment in which such matter happens to exist.<sup>5</sup> This violates the underlying assumption that the half-life of radioactive decay in any substance is absolutely fixed.<sup>6</sup> Among other radiometric procedures, the radiocarbon dating method also relies on the *amount* of carbon-14 in the atmosphere, which amount had for long been assumed to have been constant throughout Earth’s entire history. As it, however, has now been known for quite some time, nearby supernovae tend to increase the carbon-14 content in Earth’s atmosphere.<sup>7</sup>

The above did not go unnoticed by Firestone who soon began to claim to have *discovered* “four prehistoric near earth supernovae” each of which left “a unique signature” in the “cosmogenic isotope record” which showed “a sudden increase in atmospheric radiocarbon.”<sup>8</sup> One of these increases has been tied by Firestone—who claims to have “analyzed the radiocarbon record for the past 45,000 years”—to the supernova numbered 44ka, the shrapnel from which has been calculated to have reached Earth “near the time” of the Younger Dryas episode.<sup>9</sup>

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<sup>1</sup> P. D. Ward, *The Call of Distant Mammoths* (N. Y., 1997), p. 40.

<sup>2</sup> *Ibid.* (emphasis added).

<sup>3</sup> R. M. Porter, “Recent developments in Near Eastern Archaeology,” *Chronology & Catastrophism Review* (2004:3) incorporating *Chronology & Catastrophism Workshop* (2004:4), p. 29.

<sup>4</sup> *Ibid.*

<sup>5</sup> *New Scientist* (October 21, 2006), pp. 36-39; *ibid.*, (November 11, 2006), p. 26.

<sup>6</sup> See here, for instance, S. E. Schnoll, *et al.*, “Realization of Discrete States During Fluctuations in Macroscopic Processes,” *Uspekhi Fisichedkikh*, Vol. 41, No. 10 (1998), pp. 1025-1035; J. Tennenbaum, “Discovery Challenges Existence of ‘Absolute Time’,” *21st Century Science and Technology Magazine*, Vo. 13, No. 2 (Summer 2000).

<sup>7</sup> R. E. Lingenfelter & R. Ramaty, “Astrophysical and Geophysical Variations in C14 Production,” in I. U. Olson (Ed.), *Radiocarbon Variations and Absolute Chronology* (Stockholm, 1970), pp. 513-535; J. C. Houstermans, *et al.*, “Reservoir Models and Production Rate Variations of Natural Radiocarbon,” *Journal of Geophysical Research*, 78 (1973), pp. 1897-1907; G. R. Brakenridge, “Terrestrial Paleoenvironmental Effects of a Late Quaternary-Age Supernova,” *Icarus*, 46 (1981), p. 86.

<sup>8</sup> R. B. Firestone, private e-mail to various recipients (August 17, 2009).

<sup>9</sup> *Idem*, private e-mail to M. Baillie and various others (April 9, 2010).

This allowed him to excuse the incongruous, not to say impossible, dates derived for the carbon samples mentioned above.<sup>1</sup>

That supernovae wreak havoc with the radiocarbon in planetary atmospheres, we have no doubt. But, as we have often asked, how much more would the closer, even if less energetic, proto-Saturnian flare-up have disrupted Earth's atmospheric carbon-14 content? More than that, however, we should not lose track of the fact that all presently-accepted radiocarbon-derived dates have been dendrochronologically calibrated, even though this did not dispel the ambiguities associated with the Younger Dryas.<sup>2</sup>

## DENDROCATASTROPHISM

It was in an effort to curtail such resulting inconsistencies that dendrochronology was introduced to fine-tune radiocarbon-derived dates. Despite outcries to the contrary, however, dendrochronology is just as error-ridden as the radiocarbon method. As Boy Scouts are taught, the age of a tree can be told by counting the rings in its severed trunk. Dendrochronology thus entails the matching of growth rings in a series of sequentially older trees. In this way, starting from a tree of known age, dendrochronologists can calculate backward in time by matching the rings in progressively older specimens that may even include timber used in ancient structures.

The calibration of radiocarbon-derived dates is achieved through comparison on a dendrochronological curve. The curve itself is obtained through the radiocarbon dating of tree sections of known age, the resultant differences of which are then plotted on a graph.

Problems abound. How does one, for instance, tell the age of an ancient oak tree when the trunks of these old monarchs are usually hollow?<sup>3</sup> It is said that this makes "precise dating impossible."<sup>4</sup> No kidding. It does not, however, stop dendrochronologists from making what they claim are educated guesses.<sup>5</sup>

Some trees have been known to grow as much as four rings in one year.<sup>6</sup> Others fail to grow even one. Bristlecone pines, the oldest known trees still in existence, are notorious for refusing to grow rings during lean years.<sup>7</sup> Even when they *do* grow rings, they tend to "add no more than an inch to their girth *in a century*."<sup>8</sup> With growth rings often packed so tightly together, the authentication of matching rings quite often depends on who performs the match-

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<sup>1</sup> *Ibid.*

<sup>2</sup> R. Muscheler, *et al.*, "Tree Rings and Ice Cores Reveal <sup>14</sup>C Calibration Uncertainties During the Younger Dryas," *Nature Geoscience*, 1 (2009), pp. 263-267.

<sup>3</sup> J. Balog, "Trees," *Discover* (December 2004), p. 57.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> N. Glueck, *et al.*, *Botanical Review*, 7, pp. 649-713; *ibid.*, 21, pp. 245-365; V. LaMarche, "Climate Clues from Tree Rings," *New Scientist* (April 3, 1975), pp. 8-11; *Nature*, 150 (1942), p. 378.

<sup>7</sup> E. Schulman & W. R. Moore, "Bristlecone Pine, Oldest Known Living Thing," *The National Geographic Magazine* (March 1958), pp. 357, 368.

<sup>8</sup> *Ibid.*, p. 357 (emphasis added).



ing. “It has to be remembered that there is only one correct pattern,”<sup>1</sup> wrote Mike Baillie, who refers to himself as a dendrocatastrophist.<sup>2</sup> “Each tree has grown only once and ultimately its ring pattern can only fit at one place in time.”<sup>3</sup> To which he added: “Simply because two pieces look alike does not necessarily mean they fit together.”<sup>4</sup>

Dendrochronological *sequences* are also reliant on the *individual* age of each tree that is included in them. It requires a minimum of 100 overlapping rings in order for two trees to provide a good match.<sup>5</sup> That means that any tree that has survived for less than a hundred years cannot be reliably included. And then, as Bietak also found reason to complain about, how correct is a chronology that is based on ring matches between trees of different species thriving in separate areas under entirely disparate meteorological conditions?<sup>6</sup>

We have been through all this before.<sup>7</sup> As we had earlier disclosed,<sup>8</sup> water is the real constituent which limits the growth of cambium that is responsible for the formation of tree rings. This is what tree rings, when they grow at all, truly indicate—a cycle that is dictated by the availability and cessation of an adequate supply of water. Only in the most indirect way can tree rings be said to indicate seasonal change, *when they do so at all*. It therefore follows that any dating sequence that is constructed on the basis of overlapping tree rings can at best be considered relative.

Worse than all that, there have also been accusations of fabricated data. As the science writer Lewis Jones wrote:

“There isn’t even a consensus among trees. A nosey investigator was allowed to dig out the fact that a vital set of tree-ring data had all come from a single tree.”<sup>9</sup>

That is not, however, the end of it. It’s all fine to use dendrochronology to fine-tune radiocarbon dates, but, according to James Dyson, dendrochronology itself is fine-tuned and supplemented through the use of radiocarbon dating.<sup>10</sup> If that’s not circular reckoning, I do not know what is.

## RADIOMETRIC ALCHEMY

At this point I hardly need say more on the subject of radiometric dating, but, in order to forestall the accusation of nit-picking, I *will* add a few more items. To begin with, although not generally known, the Younger Dryas has led to a series of propositions that were piled on top of earlier suppositions, with agreements by some, but not by others, in an altercation that

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<sup>1</sup> M. Baillie, *Tree-Ring Dating and Archaeology* (Chicago, 1982), p. 23.

<sup>2</sup> *Idem*, “1200 BC: War, Climate Change and Cultural Catastrophe,” *Chronology & Catastrophism Workshop* (2009:1), p. 18.

<sup>3</sup> *Idem* (see reference #7 above).

<sup>4</sup> *Ibid.*

<sup>5</sup> *Idem*, *A Slice Through Time* (Bath, 1995), p. 54.

<sup>6</sup> R. M. Porter, *loc. cit.*

<sup>7</sup> *God Star*, pp. 374-377.

<sup>8</sup> *Ibid.*, p. 377.

<sup>9</sup> L. Jones, “Numbers Sanctify,” *Skeptical Briefs* (March 2010), p. 11.

<sup>10</sup> J. L. Dyson, *The World of Ice* (N. Y., 1972), p. 208.

had not subsided at the time these words were written.<sup>1</sup> What is highly interesting is that most of this debate has ranged around the different dates that have been furnished for the onset, the duration, and termination of the event in question. Even the best of authorities have had to admit that the “dating evidence” concerning this particular episode is at best “fragmentary and far from certain in many areas.”<sup>2</sup>

It might be pointed out that dendrochronology is not the only system that has been used to calibrate radiocarbon-derived dates, but none of the other schemes are any better. What is more significant is that most of the calibration had been conducted prior to 1950. Not only has the accuracy of this standard been questioned, but, what is worse, as it has been pointed out, as if the effects of supernovae aren’t enough, the atmospheric testing of nuclear weapons since that time has actually altered the absorption rate of terrestrial radiocarbon.<sup>3</sup> And then, as others have noted, whether a given date is calibrated is often not stated and, when stated, is just as often wrong.<sup>4</sup>

That debates concerning the timing of events cannot be resolved by resorting to radiometric dates and their calibrated values has been ably documented by Lily Singer-Avitz.<sup>5</sup> More often than not, the plus or minus years attached to radiocarbon readings may be as large as the differences in the dates being debated.<sup>6</sup> And then the calibration curve that is used to fine-tune these radiocarbon-derived dates is periodically revised with the addition of new data.<sup>7</sup> Besides which, there is more than one formula for obtaining this calibration curve. So that the dates that are derived through calibration depend on which calibration formula is used, since the obtained results can be quite different. Formulas, however, are not alone in being different. There are also the statistics that investigators use. As Singer-Avitz continues to inform, “different statistical models are used by different researchers” and, when used to interpret the same data, these will again produce different results.<sup>8</sup> Nor is there any point in arguing that Singer-Avitz was referring to archaeology. It certainly is no different in geology. Even when it comes to the very Younger Dryas of our concern, dates around our benchmark figure are referred to by European researchers as “the well-known” radiocarbon plateau “where calibration is almost meaningless.”<sup>9</sup>

“Single dates or periods defined by terminal dates,” it has been judged, “are estimated dates” and “only rarely can you say with precision and accuracy that an event or series of events began or ended in that year.”<sup>10</sup>

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<sup>1</sup> See “The Blue Planet,” *globalchange.umich.edu* (June 13, 2009).

<sup>2</sup> D. I. Benn, *op. cit.*, p. 2.

<sup>3</sup> See “Blytt-Sernander,” *absoluteastronomy.com* (June 13, 2009).

<sup>4</sup> *Ibid.*

<sup>5</sup> L. Singer-Avitz, “Carbon 14—The Solution to Dating David and Solomon?” *Biblical Archaeology Review* (May/June 2009), p. 28.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> S. Björck, *et al.*, “Anomalously Mild Younger Dryas Summer Conditions in Southern Greenland,” *Geology* (May 2002), p. 427.

<sup>10</sup> “Blytt-Sernander” (see above).

We could leave it there, but even that is not the entire story. Although Robert E. Lee wrote the following words toward the end of the 20th century, they continue to hold true.

“The radiocarbon method is still not capable of yielding accurate and reliable results. There are gross discrepancies, the chronology is uneven and relative, and the accepted dates are actually *selected* dates.”<sup>1</sup>

Or, to quote Robert Stuchenrath, whom Lee himself cites, the “whole blessed thing is nothing but 13th century alchemy and it all depends upon which funny paper you read.”<sup>2</sup>

What, then, is the point of calibrating these faulty dates through the just as defective and quite often circular method of dendrochronology or any other dubious method that supplies more than one graphic curve that can be culled from different statistical models?

In view of the above, it should certainly be asked: How can we be sure that the statistical model we have utilized to supply our benchmark figure of 10,000 years before the present is more accurate than any other scheme? The answer is simple enough: *in reality, we can not*. As James Adovasio rightly proclaimed, the “date’s main claim is that it is a nice round number.”<sup>3</sup> He himself presented this “round number” as the date for the start of the Holocene,<sup>4</sup> that is the *end* of the Younger Dryas. In our case, we have been presenting that benchmark figure as the *approximate* date of proto-Saturn’s flare-up, which would have ushered in, rather than ended, that particular period.

But what of all these dates? When it comes to specificity, they’re all hanging in mid air. The *uncalibrated* dates for the duration of the Younger Dryas have been calculated as stretching from 11,000 to 10,000 years ago, which figures have been calibrated to 12,900 years before the present for the inception of the period, and 11,500 years for its termination.<sup>5</sup> This would give 1,400 years for its extent, but, for whatever reason, Firestone prefers an approximate 1,000 years.<sup>6</sup> There are others who have vouched for 1,300 years,<sup>7</sup> while authorities at the University of Michigan have cut it down to a mere 700.<sup>8</sup> With all these dates, and various

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<sup>1</sup> R. E. Lee, “Radiocarbon: Ages in Error,” *Anthropological Journal of Canada*, 19 (1981), p. 27 (emphasis added).

<sup>2</sup> R. Stuchenrath, *Annals of the New York Academy of Sciences*, Vol. 288 (1977), p. 188.

<sup>3</sup> J. M. Adovasio, (with Jack Page), *The First Americans* (N. Y., 2002), p. 45.

<sup>4</sup> *Ibid.*, p. 47.

<sup>5</sup> J. B. Sissons, “The Loch Lomond Stadial in the British Isles,” *Nature*, 280 (1979), pp. 199-203; K. C. Taylor, *et al.*, “The Holocene-Younger dryas Transition Recorded at Summit, Greenland,” *Science*, 278 (1998), pp. 825-827; M. Spurk, *et al.*, “Revisions and Extension of the Hohenheim Oak and Pine Chronologies: New Evidence About the Timing of the Younger Dryas/Preboreal Transition,” *Radiocarbon*, 40 (1998), pp. 1107-1116; S. Gulliksen, *et al.*, “A Calendar Age Estimate of the Younger Dryas-Holocene Boundary at Krakenes, Western Norway,” *Holocene*, 8 (1998), pp. 249-259; K. A. Hughen, *et al.*, “Synchronous Radiocarbon and Climate Shifts During the Last Glaciation,” *Science*, 290 (2000), pp. 1951-1954; see also R. B. Alley, *loc. cit.*

<sup>6</sup> R. B. Firestone, “The Case for the Younger Dryas Extraterrestrial Impact Event: Mammoth, Megafauna, and Clovis Extinction, 12,900 Years Ago,” *Journal of Cosmology*, Vol. 2 (November 2009), pp. 256-285, available at [journalofcosmology.com](http://journalofcosmology.com) (November 10, 2009), pp. 1, 2 of 21.

<sup>7</sup> C. Hoffman, “Exploding Asteroid Theory Strengthened by New Evidence Located in Ohio, Indiana,” *uc.edu/news* (July 2, 2008).

<sup>8</sup> “The Blue Planet,” [globalchange.umich.edu](http://globalchange.umich.edu) (June 13, 2009), p. 5.

others, to say nothing of the manner in which they have been reached, as we have seen, what can one really hold on to?

As we have previously indicated, it would not really matter if proto-Saturn had flared up earlier or later than 10,000 years ago. The date for this event can in fact be moved up or down the scale of ages without affecting our model. This ensues because, if our date is out of kilter, all associated dates would be out by the same amount since they've all been estimated through the same, *and only*, technique at our disposal. And yet, when all is said and done, that round figure will be found to be close enough to the event, or series of events, under discussion. Nor are we alone in this. As we have been discovering through the study of related subjects by authorities who are not themselves involved in the radiocarbon-dating wars we have been discussing, our benchmark figure of 10,000 years ago continues to be accepted by various disciplines as the end of Earth's last glacial period and the beginning of man's most essential one.

There is, however, one other question left to answer. Comets aside, how could a heat wave, which is what we claim was caused by proto-Saturn's flare-up, have caused the re-freezing of the world?



# Chapter 10

## Substellar Interactions

### ATMOSPHERIC POLLUTION

Way before the Clovis Comet theory came into vogue, concentration of dust in Earth's atmosphere had been given as one cause for the cooling trend of the Younger Dryas. There had, however, been no consensus as to where this dust could have come from, so there's no point in citing a long list of sources which would only add to the confusion. All that will be mentioned here is that some had claimed this dust to have come from the deserts of Asia, while others blamed it all on volcanism. What it was that caused volcanic eruptions and/or dust storms severe enough to re-freeze Earth's previous glaciated regions was never quite established.

With the advent of the comet impact theory, the cooling of the land was blamed by some on the blocking of the Sun by the clouds of smoke and soot that surged up through the atmosphere from the raging forest fires we have been discussing.<sup>1</sup> Others were of the opinion that the filtering of the Sun's rays that caused the "global cooling" was due to the debris ejected by the cometary blast itself,<sup>2</sup> or from the impacts produced by fragments *from* the blast.<sup>3</sup> "The cooling," according to James Kennet, "resulted when dust from the high-pressure, high-temperature, multiple impacts was lofted into the atmosphere, causing a dramatic drop in solar radiation."<sup>4</sup>

It has additionally been claimed by others that dust and debris from the cometary outburst may have also darkened whatever ice might have remained, which darkened ice would have absorbed solar heat.<sup>5</sup> But the only way in which they could claim that this extra heat would have led to cooling is through the change in the circling ocean currents we have already put to rest. And then, since this same debris, to say nothing of the smoke and soot from the forest fires, is declared to have also dimmed the Sun's rays, what heat could the dust-covered ice have been able to absorb? By the time the pollution would have settled on the ice, the cooling trend would already have set in. Besides, as it has been determined, but forgotten by those who wish it to be forgotten, all of the pertinent sites that have been investigated by those concerned were found to have been "ice free" at the inception of the Younger Dryas.<sup>6</sup> Worse still,

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<sup>1</sup> D. Sensing, "Death From Above, Continent-Wide," *windsofchange.net* (January 13, 2008); R. Mitchum, "Scientists Say Comet Killed Off Mammoths, Saber-Toothed Tigers," *physorg.com* (January 2, 2009).

<sup>2</sup> A. Grant, "The Other Big Bang Theory," *Discover* (April 2009), p. 14.

<sup>3</sup> G. Gallessich, "California's Channel Islands Hold Evidence of Clovis-Age Comets," *University of Oregon News Release* (July 20, 2009).

<sup>4</sup> *Ibid.*

<sup>5</sup> H. Pringle, "Firestorm from Space Wiped Out Prehistoric Americans," *New Scientist* (May 26, 2007), p. 9.

<sup>6</sup> F. Largent, "The Clovis Comet—Part I: Evidence for a Cosmic Collision 12,900 Years Ago," *Mammoth Trumpet*, Vol. 23, No. 1 (January 2008), p. 25.

as some have argued, the cosmic dust that would have been released by one such blast would hardly have been voluminous and dense enough to account for the weakening of the Sun's rays to the extent of re-freezing Earth's thawing regions.<sup>1</sup>

Even so, there's more to cosmic dust than that.

## ENCIRCLING MUCK

As described in detail in a previous volume, and succinctly noted in our thirteenth hypothesis,<sup>2</sup> what we, following an intuition by Ken Moss, surmise is that ice ages were caused by the perpetual shadow cast on a ribbon of land that circled Earth's polar latitudes, while leaving Arctic regions bathed in proto-Saturn's direct beams. This is what accounts for the fact that Arctic regions teemed with warmth-loving beasts and plants through all of Earth's past glaciations.<sup>3</sup>

As outlandish as this supposition may seem, a similar situation exists at present on the planet Venus. Not only is the warmest part of Venus to be found at its north pole,<sup>4</sup> the same locality is similarly encircled by a cold polar collar,<sup>5</sup> which has been described as a "wide, shallow, river of cold air that circulates around the polar vortex."<sup>6</sup>

While this may not be seen as direct evidence for our own hypothesis, we very much doubt that the mechanisms that have been proffered to account for it are anywhere close to being correct. While there would be little point in discussing technicalities, adiabatic forcing of the Venusian atmosphere causing an unstable barotropical flow in the polar region seems to be the favored model for the planet's polar oddities. Yet even Lee Elson, a major advocate of this theory, had to admit that an actual "mechanism for producing strong polar forcing" on Venus "is not apparent," and could only defend the theory "by analogy with terrestrial atmospheric sudden warmings"<sup>7</sup>—as if these were understood. As he himself pointed out, "it is important to remember that the instability mechanism does not give any indication of what factors control the thermal structure of the [cold] collar region."<sup>8</sup>

In our own case, the shadowed ribbons of land we hold responsible for the cooling of the areas across which they fell at both Earth's poles were caused by the dust-laden auroral ovals which, due to their axial alignment with proto-Saturn's polar spindle during the periods in question, would have been much more energetic than the present ones.<sup>9</sup> As previously pointed

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<sup>1</sup> J. Hirn, "Do Impacts Cause All Mass Extinctions?" *Sky & Telescope* (September 2009), p. 23.

<sup>2</sup> See back to p. 116, this very work.

<sup>3</sup> See *Primordial Star*, pp. 296 ff. for the detailed *modus operandi* of this structure.

<sup>4</sup> B. P. Glass, *Introduction to Planetary Geology* (N. Y., 1982), p. 312.

<sup>5</sup> L. S. Elson, "Wave Instability in the Polar Regions of Venus," *Journal of the Atmospheric Sciences* (October 1982), p. 2356; R. Zimmerman, "Taking Venus by Storm," *Astronomy* (October 2008), p. 70.

<sup>6</sup> G. Piccioni, *et al.*, "South-Polar Features on Venus Similar to Those Near the North Pole," *Nature* (November 29, 2007), pp. 637-640.

<sup>7</sup> L. S. Elson, *Loc. cit.*

<sup>8</sup> *Ibid.*, p. 2361.

<sup>9</sup> *Primordial Star*, *loc. cit.*

out,<sup>1</sup> plasma has a tendency to accumulate dust even out in interstellar space. Cosmic plasmas, wrote Hannes Alfvén, are very often dusty.<sup>2</sup> Dusty plasmas, so note the members of a special panel of plasma scientists, are “the most common type” in space.<sup>3</sup> Dust grains, it has been determined, can absorb electrostatic charges from plasma which can then affect their size and their spatial distribution.<sup>4</sup> The dust’s high electrostatic potential, according to Alfvén, ensures its more efficient entrapment by the plasma.<sup>5</sup> The accumulated dust can also alter the composition of the plasma, including its density, and various other factors.<sup>6</sup> Cosmic dust is thus predisposed to accrete into denser concentrations when contained within plasmatic formations such as the highly energetic auroral ovals which circled Earth’s primeval poles.

Proto-Saturn’s sudden outburst would have wreaked havoc within its entire plasmaspheric sphere of influence. Coupled with the posited retraction of its axial Birkeland current, the sub-stellar blast would have blown Earth’s auroral ovals out of their existence. The dust they had contained would naturally have been scattered. But, dense as it might have been within the confines of the polar toroids, once it had dispersed, the dust would definitely have thinned out. Much worse than that, as we have seen, part of Earth’s once denser atmosphere would have also blown away, and with it would have gone most, if not all, of its circling polar dust. Earth would not therefore have been shielded from proto-Saturn’s heat by any of this dust. No cold would have ensued because of it.

## CIRCUMSTELLAR WASTE

There was then the dust contained in proto-Saturn’s circumstellar disk. Had this circling dust not hugged its primary in an equatorial orbit, very much like the planet’s present system of rings, its density would definitely have been enough to block out proto-Saturn’s heat entirely. Its equatorial embrace, however, would have forced it to dissipate laterally without shielding its radiating host. Besides which, it, too, would have thinned out in its dispersal.

There was, however, more to it than that. As much as one may think otherwise, not all the disk would have been blown away—at least not all at once. As has been indicated by studies conducted by the European Southern Observatory,<sup>7</sup> as also by the National University of Ireland under Gregg Hallinan,<sup>8</sup> brown dwarf stars are known to flare up axially, with their discharges concentrated along their poles. Nor must it be assumed that these axial discharges are only exhibited by brown dwarf stars. As it, in fact, transpired in 2006, the white dwarf star

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<sup>1</sup> *Ibid.*, pp. 298-299, 301.

<sup>2</sup> H. Alfvén, “Plasma in Laboratory and Space,” *Le Journal de Physique Colloque*, Vol. 40, No. C7 (July 1979), p. 11.

<sup>3</sup> National Research Council Report, published as *Plasma Science: From Fundamental Research to Technological Applications* (Washington, D.C., 1995), p. 108.

<sup>4</sup> *Ibid.*

<sup>5</sup> H. Alfvén, *loc. cit.*

<sup>6</sup> National Research Council Report, *loc. cit.*

<sup>7</sup> See illustration on page 91, this very work.

<sup>8</sup> Illustration on page 108, this work.

member of the binary system known as RS Ophiuchi was involved in what has been proclaimed as “a powerful nova eruption.”<sup>1</sup> Very much as we have posited re proto-Saturn’s relatively weaker flare, the white dwarf’s outburst was axially directed. In modeling what was actually seen to the best of their abilities, astrophysicists have to come to conclusions which are near-identical to ours. It is, for instance, not surprising to discover that material which is ejected along a nova’s poles “interacts with far less matter.”<sup>2</sup> What is even more supportive is the realization that, in the equatorial regions, the shock waves decelerate so much more rapidly, that they “may leave some circumstellar material totally unshocked.”<sup>3</sup> In fact, mid-infrared observations conducted before and after the event “imply that a considerable amount of dust in the nova’s vicinity survived the outburst—another totally baffling result.”<sup>4</sup> Granted that what is attributed to shock waves might have actually been achieved by an *electrical* discharge, the end would remain the same.

As already noted, while proto-Saturn’s disk slowly dissipated, it would probably have developed a series of widening gaps, with a vaster space between its inner periphery and the proto-Saturnian orb as can similarly be detected around existing stars.<sup>5</sup> This, as we have also seen, is what lies behind the Mayan claim that the celestial water receded to create a void.<sup>6</sup>

## SUPER-FLARING DUST

Disks and toroids aside, stellar flares are among the best dispensers of cosmic dust, sometimes emitting enough debris as would constitute 10,000 Earths.<sup>7</sup> In fact, drastic changes in past terrestrial climate have been blamed by one researcher on Earth’s passage through an interstellar cloud of dust that was spawned by such a supernova.<sup>8</sup> And while this particular stellar flare has been dated to 250,000 years ago, its dust outflow, so it’s claimed, did not reach Earth until sometime between 2,000 and 8,000 years before the present.<sup>9</sup>

That such emitted dust can actually obscure the emitting star was demonstrated by V1280 Scorpii, the nova that flared up in the constellation Scorpius in February of 2007. Eleven days after reaching its maximum brightness, the discharging star engulfed itself in the dust it had expelled which, according to Oliver Chesnau, constituted the equivalent of 33 times the mass of Earth. The shell of this debris continued to expand for “more than 200 days.” During the months that followed, the star dimmed “more than 10,000 times” its normal glow. But then,

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<sup>1</sup> S. Starrfield, *et al.*, “Prelude to Disaster,” *Sky & Telescope* (October 2009), p. 26.

<sup>2</sup> *Ibid.*, p. 30.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> A. Frank, “How to Make a Solar System,” *Astronomy* (February 2009), pp. 31-32; D. Shiga & R. Naeye, “Weird Disks,” *Sky & Telescope* (July 2006), pp. 16-17.

<sup>6</sup> D. Goetz & S. G. Morley, *The Book of the People: Popul Vuh* (Los Angeles, 1954), p. 4.

<sup>7</sup> L. Layton, “Supernovae Spawn Dust,” *Astronomy* (April 2008), p. 26.

<sup>8</sup> *New Scientist* (May 20, 1995), p. 30.

<sup>9</sup> *Ibid.*



due to its wide and rapid expansion, the dust thinned out between October and November of the same year and the star slowly re-emerged from its dispersing murkiness.<sup>1</sup>

An obscuration of a mere 200 days, at the end of which the emitting star's brightness, and therefore heat, began to re-assert itself, might be counted as hardly enough to freeze a planet. But let us not get trapped since it is not the screening of the star *per se* that should concern us, but the accumulation of its dust by a planet in its gravitational embrace.

Because of its much lower mass, proto-Saturn's flare would have fallen quite short of a nova's outburst. There is therefore no way in which it could have emitted as much dust as would constitute 33 Earths, let alone the 10,000 Earths mentioned above. But that it did emit a vast quantity of dust there is no question.

Judging by what other stellar outbursts have been seen to experience, vast amounts of debris from stellar novae can also be radiated out explosively. But whether such volatility is discharged radially or axially, as also whether it would form an expanding shell or not, it would still be fast in steering clear of its stellar host.

In proto-Saturn's case, however, a goodly portion of this expanding dust would nonetheless have swept past Earth. Whether it aided or restricted the reduction of Earth's atmosphere is now difficult to determine. So, also, is it difficult to tell how much dust, if any, was repelled off the inner surface of proto-Saturn's plasmaspheric sheath. But that a fair amount of dust was eventually captured by Earth's gravity is quite certain.

This is indicated by fluctuations in the electrical conductivity that was measured in a section of a Greenland ice core. What this revealed is that "rapid changes in the dust content of the atmosphere" took place during the very period we're concerned with.<sup>2</sup> It was this accumulated dust in the atmosphere that would have hindered proto-Saturn's heat from reaching the ground below.

This atmospheric dust would have finally settled on the land. And this, too, is evidenced by Greenland ice cores which contain as much as 100 times more dust in Pleistocene ice than in that from later times.<sup>3</sup> That this dust came from a polar source, rather than one located above North America's Great Lakes region, is evidenced by its accumulated amount in sediments retrieved from a Greenland lake which contained 1,000 times more cosmic dust than has been found in the oceans.<sup>4</sup>

Needless to say, the more rock-solid wreckage that gouged out the Carolina Bays and similar oriented pockmarks would have also been emitted with the dust.

But would Earth's capture of cosmic dust also apply to those previous cold spells that interlaced the interglacials ahead of the Younger Dryas?

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<sup>1</sup> "Watching a New Star Make the Universe Dusty," *spacedaily.com/reports* (July 28, 2008); O. Chesneau, *et al.*, "VLTI Monitoring of the Dust Formation Event of the Nova V1280 Scorpii," *Astronomy & Astrophysics*. 487 (2008), pp. 223 ff.

<sup>2</sup> U.S. National Report to IUGG, 1991-1994, "The Younger Dryas," American Geophysical Union at *agu.org* (November 18, 2007).

<sup>3</sup> C. U. Hammer, *et al.*, "Continuous Impurity Analysis Along the Dye 3 Deep Core," *American Geophysical Union Monograph*, 33 (1985), p. 90.

<sup>4</sup> *Sky & Telescope* (April 1987), pp. 367-368.

## PLASMASPHERIC REBOUNDS

Although we have posited that proto-Saturn must have gone through a *series* of flare-ups in its long cosmic career,<sup>1</sup> we have also specified that it only flared up *once* when its plasmasphere came in contact with the Sun's encasing heliosphere.<sup>2</sup> That does not, however, mean that it did not go through lesser outbursts in relation to that event. Even though we still maintain that proto-Saturn's flare-up was directly responsible for the termination of the Ice Age, the discharge of its electrical potential was preceded by relatively minor bursts. After all, we did not hide this fact from our readers in our previous work.<sup>3</sup>

As we had formerly noted, red dwarf stars often display spots that belittle the ones exhibited by the Sun. These tend to dim the star, and therefore its heat output, "by up to 40 per cent for several months at a time."<sup>4</sup> NASA's Manoj Joshi did not think that the ensuing cold caused by such spots would have been enough to send any accompanying planet into a "big freeze."<sup>5</sup> But it is not the cooling phases we should be concerned with, *but the intervening warmer periods*. Star-spots or not, the cold itself has already been accounted for through the dust-laden toroidal ribbons. What we really need to ascertain is what happened in between.

Forget spots on red dwarf stars. What we should be concerned with are the periodic *flares* that *brown* dwarf stars discharge.<sup>6</sup> This had even led Ernst Öpik to utilize that knowledge in his attempted solution to the puzzle of ice ages. According to his theory, these sporadic cold events were due to highly energetic solar variabilities. There was, however, no indication of such drastic variations on the scale that he required in past records of the Sun. He was thus forced to fall upon dwarf stars, but only as an example, since the oscillations his theory called for happen to be "a general property" of such stars.<sup>7</sup>

What must also be considered is the plasmatic cellular structure of space that was proposed by Bo Lehnert in the second half of the 1900s,<sup>8</sup> taken up by Hannes Alfvén not long after,<sup>9</sup> and expounded further by Donald Scott since then.<sup>10</sup> The boundary conditions of such

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<sup>1</sup> See *Primordial Star*, pp. 70, 82-86.

<sup>2</sup> *Ibid.*, p. 70.

<sup>3</sup> See *Flare Star*, pp. 285 ff.

<sup>4</sup> K. Croswell, "Red, Willing and Able," *New Scientist* (January 27, 2001), pp. 30-31.

<sup>5</sup> *Ibid.*, p. 31.

<sup>6</sup> *Primordial Star*, pp. 82-83; P. Rincon, "Dwarf Stars Emit Powerful Pulse," *BBC News* (April 21, 2007); G. Hallinan, *et al.*, "Rotational Modulation of the Radio Emission from the M9 Dwarf TVLM 513-46546: Broad-band Coherent Emission at the Substellar Boundary?" *The Astrophysical Journal* (December 10, 2006), pp. 690 ff.

<sup>7</sup> E. J. Öpik, "The Ice Ages," *The Irish Astronomical Journal*, Vol. 2. No. 3 (1952), reprinted in P. Cloud (Ed.), *Adventures in Earth History* (San Francisco, 1970), pp. 874-875.

<sup>8</sup> F. Lehnert, "Element Separation Effects in the Boundary region of a Plasma Surrounded by Neutral Gas," *Astrophysics and Space Science*, 40 (1976), p. 225.

<sup>9</sup> H. Alfvén, "Plasma in Laboratory and Space," *Le Journal de Physique Colloque*, Vol. 40, No. Ct (July 1979), pp. 5, 10, 16; *idem*, "Cosmology in the Plasma Universe: An Introductory Exposition," *IEEE Transactions on Plasma Science*, 18:1 (February 1990), p. 6.

<sup>10</sup> D. E. Scott, "Real Properties of Electromagnetic Fields and Plasma in the Cosmos," in *ibid.*, 35:4 (August 2007), p. 822.

cells play an important role in space since plasma behavior is not always reliant on its local parameters. On the contrary, it is often affected by the attributes of its adjoining cells. When a body passes from one cell into another of drastically different electrical potential, there ensues a violent release of energy. Besides which, some plasma cells contain a double layer which can explode with great intensity.<sup>1</sup>

Thus, besides what might have been its own intrinsic minor flares, proto-Saturn would also have experienced massive disruptions as it passed from one cell into another during its passage through space. These episodes would have become especially manifest when the Sagittarius dwarf galaxy, to which the proto-Saturnian system originally belonged, began slicing through the Milky Way.<sup>2</sup>

These abrupt flares would have brought previous ice ages to their fairly sudden ends. And this includes the manner in which the last of these cold periods drew its final curtain. We cannot, however, rely on outbursts of such immense energy when it comes to the interglacials that punctuated the final stages of the Pleistocene. Besides which, it is now known that the plasmaspheric sheaths that encase cosmic bodies do not surrender to alien spheres without a fight.

As Donald Scott has indicated, the plasmasphere of an approaching body might very well bounce on contact with another, such as the Sun's heliosphere, before merging with it.<sup>3</sup> And this, as we had also mentioned,<sup>4</sup> was additionally intimated by Hannes Alfvén in his declaration that when a plasma contacts an obstacle, such as the Sun's heliopause, it is stopped and deviated.<sup>5</sup>

Such skirmishes between proto-Saturn's encasing plasmasphere and the boundary of the Sun's heliosphere is what we believe resulted in the relatively minor flares that were responsible for interglacials. This is in keeping with Wallace Thornhill's views, as previously quoted,<sup>6</sup> and repeated below:

"Subsequent early crossings of the solar wind plasma sheet would [have induced] additional episodes of extraordinary electrical activity until the electric differences [would have been] reduced. The passage of proto-Saturn...across the heliopause boundary would not have been a once-only event, since the heliopause is not a stationary interface. Just as spacecraft passing behind Jupiter or Saturn today may repeatedly cross the 'magnetotail' of the planet as the tail 'flaps' in the solar wind, so proto-Saturn may have crossed the Sun's electrical boundary more than once, [and] each crossing would have caused flaring and an acceleration by proto-Saturn toward the Sun..."<sup>7</sup>

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<sup>1</sup>H. Alfvén, "Plasma in Laboratory and Space" (see above), p. 5.

<sup>2</sup> *Primordial Star*, pp. 8, 355-358.

<sup>3</sup> See *Flare Star*, p. 287.

<sup>4</sup> *Ibid.*

<sup>5</sup> H. Alfvén, *Cosmic Plasma* (Dordrecht, Holland, 1981), p. 68.

<sup>6</sup> *Flare Star*, *loc. cit.*

<sup>7</sup> W. Thornhill, "The Electric Saturnian System," *AEON* VI:1 (February 2001), p. 39.

It is these relatively minor proto-Saturnian outbursts that, according to our scheme, would have been responsible for the sudden hot spells that cut through the cold toward the end of the Pleistocene Ice Age. The intervening spells between these sudden flares would have merely been a return to the underlying cold which the hot episodes temporarily moderated. While not entirely insignificant, the lesser vehemence of these outbursts accounts for the lack of extinctions during their phase which Firestone noted in his defense.<sup>1</sup>

## HELIOSPHERIC SKIRMISHES

Exactly how many of these rebounds, deviations, and crossovers proto-Saturn would have experienced in its struggle to overcome the Sun's plasmaspheric boundary can be determined from the number of interglacials that punctuated the Pleistocene toward its end. Depending on who does the counting, to say nothing of how the counting is conducted, something like 20 climatic shifts are said to have taken place through the last glacial age.<sup>2</sup> How many of these fluctuations were caused by plasmatic interactions or proto-Saturn's intrinsic outbursts as the Sagittarius dwarf galaxy to which it belonged ploughed through the Milky Way will probably never be ascertained. But that need not impede our reconstruction since we are here mostly concerned with the last few climatic upsets that ushered in the Holocene.

As we have now noted more than once in our works, various stars are seen to travel through space in a poleward direction. That the proto-Saturnian system had also been traveling poleward is evidenced by the present close-relational angle of Saturn and Earth's rotational axes which points to the two bodies' former axial sharing. This has led to the assumption that the proto-Saturnian system would have approached the solar one at close to this shared axial angle from below, or above, the Solar System's equatorial plane. As the system neared the Sun, its attractive influence would have increased proto-Saturn's velocity, as it would also have commenced to heighten its exertion on the intruder's directional vector. Because of various other matters we had taken into consideration,<sup>3</sup> we then concluded that proto-Saturn's line of approach would have been toward the periphery of the Sun's heliosphere. The proto-Saturnian system's velocity would then have been dampened by the initiation of a slow circular motion around the center of the Sun's extended axis. This solar orbit would, however, have been open-ended which, in keeping with proto-Saturn's poleward motion, would have evolved into a slowly ever-closing spiral. It was during this complex track around the Sun that the proto-Saturnian system's encasing plasmasphere would have brushed against, bounced off, and re-approached the Sun's heliospheric boundary time and again.

Consider now the planetoid named Sedna.<sup>4</sup> Moving just out, but this side, of the Kuiper belt, it takes this body somewhere from 12,000 to 10,500 years to complete one circuit of the

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<sup>1</sup> R. B. Firestone, "The Case for the Younger Dryas Extraterrestrial Impact Event: Mammoth, Megafauna, and Clovis Extinction, 12,900 Years Ago," *journal of cosmology.com* (October 27, 2009).

<sup>2</sup> W. S. Broecker, "What If the Conveyor Were to Shut Down? Reflections on a Possible Outcome of the Great Global Experiment," *GSA Today* (January 1999), p. 4.

<sup>3</sup> See *Flare Star*, pp. 260-261.

<sup>4</sup> *Ibid.*, pp. 439-440, 503-504.



Sun.<sup>1</sup> Fair enough, Sedna's orbit is a highly elliptical one. But while proto-Saturn's spiraling orbit would have been an ever-closing one, its brushes with the Sun's heliosphere would have taken place still farther out than Sedna's orbit, even farther than the Kuiper belt itself. At best, proto-Saturn's long series of plasmaspheric interactions before its final flare-up would have taken it only part-way around the Sun.

## VARIATION IN INTENSITY

Let us not, however, simplify matters more than is required because, when all is said and done, proto-Saturn's expelled dust did play an additional role, no matter how slight, in the temperature fluctuations toward the end of the Pleistocene. The sudden heat emitted by each of proto-Saturn's minor outbursts would not have lasted all that long since, following each outburst, the proto-Saturnian sun would have returned close to its previous temperature. That, alone, would have tended to re-cool Earth's cosmic environment. Added to that, however, would have been the temporary shielding of proto-Saturn by the accumulation of dust in the terrestrial atmosphere. Needless to say, the dust that would have been emitted by the relatively minor outbursts that proto-Saturn would have experienced due to its rebounds off the Sun's heliopause would not have been as extensive as that dispelled through proto-Saturn's major flare. But at such a close distance, no matter how relatively little the expelled dust would have been, it would still have added its weight in influencing climatic change. This is upheld by the catastrophically impressed fingerprints left on Earth by these fluctuations. Analyses of Greenland ice cores well indicate that these climatic variations occurred "consistently and frequently" in "periods of less than a decade, and on occasion as quickly as three years."<sup>2</sup> While, as always, we're somewhat wary when it comes to such precision, my readers are asked to keep that in mind when others invoke *thousands* of years in relation to these events.

That dust *was* involved in these climatic upsets is again verified by findings which indicate that transitions between warmer and colder periods were characterized by "abrupt fluctuations" in "dust concentrations,"<sup>3</sup> and by further signs which show that Earth's atmosphere was less dusty during warmer periods.<sup>4</sup> The onset of the Younger Dryas was definitely marked by a period of increased dust fall. And although this seems to have only lasted about five years, it was followed by a further stretch of fluctuating dusty and less dusty periods until the beginning of the Holocene.<sup>5</sup>

The changes in dust concentration have also been found to be partly reliant on "rapid changes in sea surface temperatures" and a "re-ordering of atmospheric circulation" which seems to have led to "increased wind speeds."<sup>6</sup> Change of wind speeds and direction, as well

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<sup>1</sup> *New Scientist* (March 20, 2004), p. 15.

<sup>2</sup> K. C. Taylor, *et al.*, "The 'Flickering Switch' of Late Pleistocene Climate Change," *Nature* (February 4, 1993), p. 435.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, p. 434.

<sup>5</sup> W. S. Broecker, *op. cit.*, p. 3.

<sup>6</sup> K. C. Taylor, *et al.*, *op. cit.*, p. 435; P. L. Hancock, *et al.*, *loc. cit.*

as sea incursions, would have been brought about by Earth's rotational braking. And this, too, would have had a telling influence on the extent and distribution of dust in Earth's roiling atmosphere.

### EXAGGERATED SEVERITY

It is these very fluctuations in temperature and their resultant signatures on Earth's flora that has fooled many an investigator into thinking in terms of seasonality. Not only that, but, contrary to those who claim that the return to cold was more drastic in North America than elsewhere, pollen evidence has fooled others into claiming that the Younger Dryas "didn't cause significant climate change outside northern Europe."<sup>1</sup> All of which drove Wallace Broecker to conclude, and rightly so, that while its effects were global, "the Younger Dryas was not simply a return to glacial state."<sup>2</sup> The harshness of the Younger Dryas, it now seems, has been severely overstated.

At the end of the Ice Age, sea levels rose due to the melting of glacial ice. In some areas, however, crustal rebound has been found to have exceeded sea-level rise. Among other effects, this rebound caused an area off the Greenland coast to rise *above* the sea and form the island of Angissoq. Former marine basins in this coastal area were thus transformed into inland island lakes.<sup>3</sup> What is highly interesting is that, during the Younger Dryas, plants were still growing on the island.<sup>4</sup> Furthermore, according to analyses conducted on the sediments of one of these lakes, what have been termed "Younger Dryas *summer* conditions" in the North Atlantic region seem to have experienced "regional and local variations" that "may have been larger than previously found from proxy data and modeling experiments."<sup>5</sup> In fact, the interims under these "conditions" are considered to have been mild,<sup>6</sup> even fairly warm.<sup>7</sup> Lake productivity, including colonies of green algae,<sup>8</sup> was not only "fairly constant," but apparently "higher" during the Younger Dryas.<sup>9</sup> What this implies is that there was "better light conditions" at lake bottoms,<sup>10</sup> which does not square well with a drastic lack of light. This has naturally led to the conclusion that lake temperatures had to have been warm.<sup>11</sup> The surrounding ocean, on the other hand, was ice covered most of the time,<sup>12</sup> but this is no different than at present despite the fact that Earth is not presently in a deep freeze.

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<sup>1</sup> W. S. Broecker, *loc. cit.*

<sup>2</sup> *Ibid.*

<sup>3</sup> S. Björck, *et al.*, "Anomalously Mild Younger Dryas Summer Conditions in Southern Greenland," *Geology* (May 2002), p. 427.

<sup>4</sup> *Ibid.*, p. 428.

<sup>5</sup> *Ibid.*, p. 427 (emphasis added).

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*, p. 430.

<sup>8</sup> *Ibid.*, p. 429.

<sup>9</sup> *Ibid.*, p. 428.

<sup>10</sup> *Ibid.*, pp. 428, 429.

<sup>11</sup> *Ibid.*, p. 430.

<sup>12</sup> *Ibid.*

Climatic instabilities have now been found to have affected different regions,<sup>1</sup> varying in intensity in different localities, especially between Europe and the Pacific coast of North America,<sup>2</sup> despite those who have been led into thinking otherwise. To be sure, climatic disparities were quite drastic throughout the entire duration of the Younger Dryas.<sup>3</sup> More than that, as our own scheme actually calls for, climatic upsets in Earth's southern hemisphere appear to have been inconsequential. Furthermore, pollen data from deep marine sediments extracted from the Cariaco Basin off the coast of Venezuela indicate that the neotropical region "was not affected by dramatic cooling" during the very Younger Dryas of our concern.<sup>4</sup>

## BACK TO WARMTH

Earth's accumulation of proto-Saturn's emitted dust was not constant through its past climatic ups and downs. Although he continues to cling to the Milankovitch cycles, Gino Segrè rightly informs us that changes in this accumulation "occurred quickly, in decades, and sometimes in as little as a few years."<sup>5</sup>

Others have claimed that "the cooling at the start of the Younger Dryas was gradual,"<sup>6</sup> but it all depends what one means by "gradual." Since, as we have noted, the ancients actually remember that many of those who lived beyond the heat wave succumbed to the chilling event that followed, the inception of the cold could not have taken all that long.

We also note that the boundary between the dusty ice of the Pleistocene and that of the following Holocene is abrupt, which tells us that the Younger Dryas came to just as sudden an end.<sup>7</sup> According to just about all those who have dared to venture into this trap-laden territory, the ending of the Younger Dryas occurred in a mere 40- to 50-year period—"within a few years or decades at most"<sup>8</sup>—with some actually vouching for an even more rapid transition of even fewer years.<sup>9</sup>

Average temperatures at the end of this period increased "by as much as seven degrees in twenty years."<sup>10</sup> This, as Bill Bryson tells us, "doesn't sound terribly dramatic but is equiva-

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<sup>1</sup> P. L. Hancock, *et al.*, *op. cit.*, pp. 1114-1115.

<sup>2</sup> P. A. Friele & J. J. Clague, "Younger Dryas Readvance in Squamish River Valley, Southern Coast Mountains, British Columbia," *Quaternary Science Reviews* (October 2002), pp. 1925-1933.

<sup>3</sup> P. L. Hancock, *et al.*, *loc. cit.*

<sup>4</sup> I. Delusina, *et al.*, "Neotropical Moisture and Dryness Dynamics at the Late Glacial/Holocene Transition Recorded by Pollen from the Cariaco Basin, Caribbean Sea," *Meeting Abstracts of the American Geophysical Union* (December 5-9, 2005).

<sup>5</sup> G. Segrè, *A Matter of Degrees* (N. Y., 2002), p. 104.

<sup>6</sup> P. Hancock & B. J. Skinner, *The Oxford Companion to the Earth* (Oxford, 2000), p. 1113.

<sup>7</sup> W. Dansgaard, *et al.*, "The Abrupt Termination of the Younger Dryas Climate Event," *Nature*, 339 (1989), p. 532.

<sup>8</sup> P. Hancock & B. J. Skinner, *loc. cit.*

<sup>9</sup> J. B. Sissons, "The Loch Lomond Stadial in the British Isles," *Nature*, 280 (1979), pp. 199-203; W. Dansgaard, *et al.*, "The Abrupt Termination of the Younger Dryas Climate Event," *Nature*, 339 (1989), pp. 532-534; R. B. Alley, *loc. cit.*

<sup>10</sup> B. Bryson, *A Short History of Nearly Everything* (Canada), p. 430.

lent to exchanging the climate of Scandinavia for that of the Mediterranean *in just two decades*.”<sup>1</sup>

“Locally, changes have been even more dramatic. Greenland ice cores show the temperatures there changing *by as much as fifteen degrees in ten years*, drastically altering rainfall patterns and growing conditions.”<sup>2</sup>

## ABORTED CREATIONS

Our ancestors would have subsisted through the entire stretch of these climatic disruptions. It is, however, doubtful they would have been keeping track of all of them especially since most tribal units would have resided outside the affected regions. But because of the transformations that touched the sky during the last series of these changes, any culture that impinged on any of the weather-beaten areas would surely have retained some memory of these radical events. Even though the mytho-historical record did not preserve too many of these recollections, the specific details contained in the following examples are in themselves remarkable.

The Tchiglit we mentioned in earlier chapters were not the only Amerinds who remembered the icy onslaught that followed on the heels of a previous abrupt heat-wave. Because the event that went down in mytho-history as the Creation was heralded by the shedding of proto-Saturn’s flare-up, it seems that, in retrospect, our ancestors came to understand proto-Saturn’s previous minor flares as having signaled similar attempts that failed.

This state of affairs was clearly remembered by the Chippewa who declared that “God tried to create the world four times but he failed the first three times because there was too much ice.” In the end “he was successful” so that people, together with animals, managed to survive.<sup>3</sup>

The Hopi also claimed that Sótuknang, their Creator, had occasion to abort previous attempts at Creation. It was not until the third attempt that the ice splintered, started to melt, and “the world began to warm to life.”<sup>4</sup>

We notice that, in both the above cases, the number of failed attempts are limited to no more than three, which is in keeping with our proposal that ancient man would only have passed on the memory of the last few changes in the Pleistocene’s series of climatic transformations. What is of additional interest is that these recollections come from the original inhabitants of North America, the ancestors of whom are believed to have lived close to the glaciated areas the peripheries of which would have experienced most of the thawing and re-freezing. It is for that reason that the ice was blamed for the noted failures at Creation.

That “people and animals survived” might have been true as far as the Chippewa’s ancestors were concerned. But not all animals and tribal groups would have fared that well,

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<sup>1</sup> *Ibid.* (emphasis added).

<sup>2</sup> *Ibid.* (emphasis added).

<sup>3</sup> V. Deloria, Jr., “Catastrophism and Planetary History,” *KRONOS* III:4 (Summer 1978), p. 49.

<sup>4</sup> F. Waters, *Book of the Hopi* (N. Y., 1974), p. 20.



certainly not the Magdalenian culture we had reason to extol in a previous volume of this series.<sup>1</sup> Although the end of the period during which that culture thrived has been dated differently by different authorities,<sup>2</sup> there are those who claim that the north European Magdalenians did not make it past the Allerød as, according to others, neither did the Clovis in North America.<sup>3</sup>

### TRAUMATIC TIMES

When, according to Tahitian lore, light first burst upon the world at the freeing of Atea, there was great rejoicing. The everlasting night of previous ages had come to a sudden end. "There was tumbling and rolling over each other...shouting and clinging one to the other!"<sup>4</sup> But if such scenes of joy really took place, they could not have lasted long. In fact, during the time in question, as James Adovasio ably noted, life was "undergoing what was one of the more traumatic times in the history of the earth."<sup>5</sup> In view of what really had taken place, even *that* can be seen as something of an understatement. For people living at the time, he went on, the world may well have seemed unstable,<sup>6</sup> as in fact it was and continued to be for a long time afterwards.

In the above, Adovasio restricted these "traumatic times" to "the living things of North America"<sup>7</sup> whereas, as we have seen, the consequences of proto-Saturn's major flare-up would have affected the entire globe, even if less severely south of the equator. Additional to that, Adovasio was actually referring to what transpired *during* the Clovis era which, according to him, in agreement with Brian Fagan, would have risen at the *inception* of the Younger Dryas. This, as he goes on, "could have caused wetter and more favorable game conditions on the Great Plains and in the Southwest" and, for "a few hundred years thereafter," would have "allowed Clovis folk to flourish, spread out, and adapt to a wide range of environments."<sup>8</sup> On the other hand, as we have seen, according to Richard Firestone and his colleagues, the disaster that ushered in the Younger Dryas was responsible for *terminating* that very culture.

By the end of 2009, however, the generally accepted date for the emergence of Clovis man was being touted as 13,000 years ago,<sup>9</sup> with the cometary impact placed at 12,900 years before the present.<sup>10</sup> Since that only leaves 100 years for the entire duration of the Clovis culture, it doesn't seem to make much sense. We therefore turn back to Firestone who dates both the *onset* of the Younger Dryas and the *disappearance* of the Clovis culture to that very same

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<sup>1</sup> *Flare Star*, pp. 194-195, 200, 268-270, 274, 279.

<sup>2</sup> See *ibid.*, pp. 340-341.

<sup>3</sup> J. B. Kloosterman, "The Usselo Horizon, A Worldwide Charcoal-Rich Layer of Allerød Age," *Proceedings of the Conference: New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man*, (Bergamo, 2002), p. 152.

<sup>4</sup> T. Henry, *Ancient Tahiti* (Honolulu, 1928), p. 412.

<sup>5</sup> J. M. Adovasio (with Jake Page), *The First Americans* (N. Y. , 2002), p. 55.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*, pp. 55, 273.

<sup>9</sup> I. Semeniuk, "Ice Age Impact," *Sky & Telescope* (September 2009), p. 25.

<sup>10</sup> *Ibid.*, p. 20.

approximate time, 12,900 years ago.<sup>1</sup>

At this point, in view of what we have already learned about the methods that have been used, specific dates are not really what we're after. What we are trying to determine is whether the Clovis culture came to light or ended at the inception of the much debated Younger Dryas. After all, it was this problem that first attracted William Topping to the subject. It was he who first discovered the magnetic microspherules in post-Clovis sediments at various Paleoamerican sites.<sup>2</sup> As already noted, critics had pointed out that such microspherules make up "part of the normal cosmic rain" that constantly drizzles down on Earth.<sup>3</sup> But, at one particular site that Topping investigated, this cosmic residue was "present at abnormally high levels."<sup>4</sup> So, also, as it turned out, in various other Clovis sites that Allen West investigated after he took up the torch that had been snatched from Topping's hand.<sup>5</sup> Enriched levels of iridium and nickel, which are among some of the typical markers of cosmic impacts, together with a host of other evidence, including the much disputed nanodiamonds, also came to light at some of the sites.<sup>6</sup>

But let's be clear about all this.

Although, to date, more Clovis relics have been discovered in eastern North America than in the west,<sup>7</sup> the geographical extent of the culture was actually quite vast.<sup>8</sup> The tools and weapons manufactured by these people have been found "practically everywhere across the United States,"<sup>9</sup> extending "from the eastern foothills of the Rocky Mountains all the way to the east coast" and "into northern Mexico" with "similar tools...as far south as the southern tip of South America."<sup>10</sup>

The geochemical analysis that resulted in the discovery of the cosmic impact evidence had however come from *a mere twenty-five* North American archaeological sites, *only nine of which happened to be Clovis*.<sup>11</sup> This is also confirmed by Firestone,<sup>12</sup> even though, as in other matters, he is anything but consistent. Thus, on the very next page of the same work, he vouches for ten such sites,<sup>13</sup> only to reduce the number to eight in the page following that.<sup>14</sup>

Whether the correct number is eight, nine, or ten does not really matter, especially since,

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<sup>1</sup> R. B. Firestone, "The Case for the Younger Dryas Extraterrestrial Impact Event: Mammoth, Megafauna, and Clovis Extinction, 12,900 Years Ago," *Journal of Cosmology*, Vol. 2 (November 2009), pp. 256-285, available at [journalofcosmology.com](http://journalofcosmology.com) (November 10, 2009), p. 1 of 21.

<sup>2</sup> F. Largent, "The Clovis Comet," *Mammoth Trumpet* (January 2008), p. 26.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

<sup>7</sup> R. Boswell, "Scientists Turn Migration Theory on Its Head," *Vancouver Sun* (February 26, 2010), p. B4.

<sup>8</sup> J. M. Adovasio, *op. cit.*, p. xvii.

<sup>9</sup> *Ibid.*, p. 105.

<sup>10</sup> *Ibid.*, p. 117.

<sup>11</sup> R. Dalton, "Blast in the Past?" *Nature* (May 17, 2007), p. 256.

<sup>12</sup> R. B. Firestone, *op. cit.*, p. 1.

<sup>13</sup> *Ibid.*, p. 2.

<sup>14</sup> *Ibid.*, p. 3.

once again, it all depends on who is doing the counting, even though it does seem like a pitiful amount of sites in face of the continental expanse covered by the Clovis culture. But, as we're forced to keep on saying, let that be. Of more importance is the realization that no Clovis artifacts have yet been discovered above the black mat of charcoal that was laid down by the forest fires that took place around that time.<sup>1</sup> This would then mean that Adovasio, who did so much to further the antiquity of Amerind ancestry in North America, must have miscalculated when he stated that Clovis man must have burst upon the scene at the *beginning* of the Younger Dryas.

### LIFE ON THE VERGE

Regardless of what the specific dates turn out to be,<sup>2</sup> Adovasio holds that the Clovis culture "extended no more than seven hundred years after it all began."<sup>3</sup> But, as he also tells us, there were other cultural groups besides the Clovis during the same time, some of whom continued to thrive well after the former had disappeared.<sup>4</sup> This is in keeping with Rex Dalton who reported that there is "no evidence of a similar decline in other Palaeoindian populations" and that "even as the Clovis culture was disappearing, other cultures arose in its place, for reasons not entirely understood."<sup>5</sup>

In Europe, after "an uninterrupted development of some 30,000 years," as Johan Kloosterman noted, the Magdalenian culture came to a sudden end "accompanied by rockfalls in rockshelters and caves."<sup>6</sup> And while he dates the disappearance of this society as having transpired *during* the Allerød, rather than its end, as he also does with Clovis man,<sup>7</sup> he is still dealing with the same "major crisis in the biosphere" related to the Younger Dryas.<sup>8</sup>

And yet, in the Near East, the Kebaran culture did not only survive the calamity, it actually experienced progress. In Mallaha, on the shore of the desiccated Lake Hula in the Jordan Valley, a "decisive step" was taken by this social group that led to "a new way of life."<sup>9</sup> Described as "an abrupt acceleration of cultural and technical development" that took place 10,000 years ago, it culminated in the more sophisticated social order which is now known as the Natufian.<sup>10</sup> Not only was this culture responsible for constructing what might be the oldest known dwellings in the Near East,<sup>11</sup> but also for possibly establishing the earliest harvesting of cereals.<sup>12</sup>

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<sup>1</sup> *Ibid.*, p. 2.

<sup>2</sup> J. M. Adovasio, *op. cit.*, p. xvii.

<sup>3</sup> *Ibid.*, p. 106.

<sup>4</sup> *Ibid.*, pp. 264, 266.

<sup>5</sup> R. Dalton, *op. cit.*, p. 257.

<sup>6</sup> J. B. Kloosterman, "The Usselo Horizon, a Worldwide Charcoal-Rich Layer of Allerød Age," in E. Spedicato & A. Notarpietro (Eds.), *Proceedings of the Conference: New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man* (Bergamo University, 2002), p. 152.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*, p. 153.

<sup>9</sup> J. Perrot, "Twelve Thousand Years Ago in the Jordan Valley," *CNRS Research* 8 (1978), p. 5.

<sup>10</sup> *Ibid.*, p. 6.

<sup>11</sup> *Ibid.*, p. 2.

<sup>12</sup> *Ibid.*, p. 6.

So what was it, exactly, that took place in the human population and the cultures it created at this particular time? What made some cultures disappear while others rose to take their place? Why did the calamity that took place 10,000 years ago not affect our ancient forebears in the same way?

Part of the answer, as supplied by Kloosterman, is that the apparent disappearance of cultures was due to “a sharp population reduction *and a lapse into Mesolithic primitivism*.”<sup>1</sup> In other words, as would probably happen in today’s world if we’re foolish enough to engage in an all-out nuclear war, survivors might easily be flung back into a stone-age type of living. And that is precisely what transpired due to proto-Saturn’s major flare-up. It is not that Clovis man, the Magdalenians, and other peoples were all wiped cleanly off the face of the Earth, but the cultures they had created were all reduced to shambles as all and sundry sought security in whatever promised safety. That not all succeeded is confirmed by the number of bones we now find crammed in caves and fissures, beneath the rocks of colossal slides, burnt to cinders in compacted ash heaps, and drowned beneath vast oceanic sediments. Those who managed to escape would not have had it in mind to continue chipping chert into the type of tools that had earlier become the mainstay of Clovis trade, any more than the Magdalenians would have felt impelled to add further layers of their realistic animal friezes in the caves they now used as shelters from the calamitous Earth that had become their foe and the flaming hells that showered down upon them from what had turned into an alien sky.

In July of 2009, a 7.8 magnitude earthquake managed to move the south of New Zealand closer to Australia, narrowing the 1,400-mile gap of the Tasman Sea by 12 inches.<sup>2</sup> A little more than six months later, a more massive earthquake, registering at magnitude 8.8, struck Chile. It, too, managed to shift localities, but never mind 12 inches. The city of Concepcion was slid to the west by “at least 10 feet” while entire sections of South America as far apart as the Falkland Islands and Fortaleza in Brazil were also moved.<sup>3</sup> All of these shifts were due to the jerky shifting of Earth’s tectonic plates. Try, then, to imagine the colossal shifts and their accompanying destruction that would have ensued through Earth’s rotational braking, to say nothing of the additional catastrophic annihilation that was augmented by the sudden incursion of Earth’s entire oceans deep into the world’s west coastal regions. Despite the severity and death toll incurred by present-day earthquakes, tsunamis, and volcanic eruptions, they all add up to minor hiccups when compared to what transpired 10,000 years ago as also, but worse still, in previous ages due to proto-Saturn’s cosmic outbursts.

Some of the biggest signs of the destructions that took place during the time we’ve been discussing have gone unnoticed, and that’s because, down through the years, many of them were camouflaged by further sediments and/or covered with the rotting roots and trunks of later forests. A good example came to light, even as these words were being written, when two Canadian geologists managed to reconstruct “a portrait of the largest landslide in North American history.” This consisted of “a colossal avalanche of boulders that thundered down a

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<sup>1</sup> J. B. Kloosterman, *loc. cit.*

<sup>2</sup> “Massive Quake Moves N[ew] Zealand Closer to Australia,” *breitbart.com* (July 22, 2009).

<sup>3</sup> E. Holland, “Researchers Show How Far South American Cities Moved in Quake,” *physorg.com* (March 8, 2010).





Clovis spear point

Rocky Mountain slope near the B.C.-Alberta border *about 10,000 years ago.*” While it permanently shifted the Continental Divide, it left the valley below “strewn with debris that still dominates the landscape ten millennia later.” As also reported: “When the mountain gave way, any Stone Age hunters in the vicinity might have been convinced the end of the world was unfolding.”<sup>1</sup>

Despite its size—1,300 million cubic meters of dislodged boulders—and despite the fact that the area, known as the Valley of the Rocks, is located in one of British Columbia’s most famous parks,<sup>2</sup> this landslide had gone “virtually unrecognized” in scientific literature until detailed for the very first time in 2010 by Nick Roberts of Simon Fraser University and Steve Evans of the University of Waterloo.<sup>3</sup> How many other destruction sites that can be dated to the same time around the world still remain to be identified?

We have already noted that the first thing our ancient ancestors would have sought in face of such widespread destruction would have been safety. Survivors would have looked for others in an effort to reinforce their dwindled numbers. It was in this manner that survivors from diverse legacies merged to form bigger enclaves, incorporating different, even if related, beliefs in addition to innovative techniques in manufacturing tools and weapons and whatever else was needed for subsistence. Some of these mergers led to reduced cultural skills, since quite a few trained artisans would have been killed, while others ended up in improved sophistication due to the amalgamation of those artistic methods that managed to survive.

Although it need hardly be told that animals suffered as much as humanity, it *is* interesting to note that the extinction of Pleistocene fauna “took a bit longer” in the south than it did in the north. Adovasio is of the opinion that the “difference in timing...is essentially unimportant” and that the reasons for this “remain to be explained fully.”<sup>4</sup> We, on the other hand, hold this timing as very important especially since it is directly coupled to the main reason

<sup>1</sup> R. Boswell, “Gigantic Avalanche Dwarfs Hope Slide,” *The Vancouver Sun* (April 22, 2010), p. B14 (emphasis added).

<sup>2</sup> Mount Assiniboine Provincial Park.

<sup>3</sup> *Ibid.*

<sup>4</sup> J. M. Adovasio, *op. cit.*, p. 199.

behind the slight tardiness of the southern exterminations. Since, in our opinion, the explosive force behind the extinctions came from the north celestial pole, inhabitants of Earth's northern hemisphere would have received its major brunt. Life in the southern latitudes would have been walloped by the cosmic radiation that was reflected off the inner surface of the proto-Saturnian system's encasing plasmasphere somewhat less severely. This would have led to slower deaths resulting in a longer period of struggle before eventual extermination.

As in earlier extinctions, animals of large bulk succumbed more readily than those of smaller size. "In all," according to Adovasio, "some thirty-three genera of mostly gigantic late Pleistocene mammals" went extinct. "The animals that disappeared were almost entirely large—even extralarge—animals."<sup>1</sup>

"What was left after the major extinctions had occurred was a host of medium and small mammals ranging from beaver and raccoons to mice and moles; largish prey animals consisting of today's bison, bighorn sheep, mountain goats, pronghorns, mule and whitetail deer, elk, moose, caribou, and musk ox; and predators consisting of polar bears, grizzly and black bears, mountain lions and other relatively small cats—such as ocelots, lynxes, and bobcats—foxes, coyotes, and a handful of wolves. For the first Americans, things had changed dramatically from those grand adrenaline-filled millennia south of the ice sheet when the world was new and terrifyingly aswarm with giants."<sup>2</sup>

What is most strange about this is that one would expect the glacial age to have been less conducive to larger life than the much warmer, wetter, and greener period that followed. It thus seems more than likely that the diminution of faunal size had nothing to do with the change of climate but must have been due to some lesser understood cosmological factor such as the one outlined above.

### THEORY UNDER FIRE

That the Clovis Comet theory would continue to be censured was expected. Most of the objections raised against it, however, can just as well be criticized. It is not that we accept this theory in the manner it has been presented, as neither do we contest some of its criticisms. But those who have raised objections to it did not so much have the comet itself in mind. The real object behind their criticisms was the catastrophic impact, or series of impacts, that led to the annihilation of the Clovis culture. Thus, for instance, when the theory was described as "one of the most misguided ideas in the history of modern archaeology,"<sup>3</sup> it identified its main objectors as archaeologists rather than cosmologists who should have been much more concerned. Needless to say, these archaeologists were mainly those who were best known for their in-depth studies of Clovis man. How could they have missed the devastating event that had brought the culture of their life-long study to its drastic end! Or, better still, how could they live with such disclosure?

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<sup>1</sup> *Ibid.*, p. 118.

<sup>2</sup> *Ibid.*, p. 120.

<sup>3</sup> R. Dalton, "Comet Theory Comes Crashing to Earth," *archaeologynewsnetwork.blogspot.com* (May 14, 2011).

Let us, however, be quite honest. There were also geologists, such as Andrew Scott,<sup>1</sup> and physicists, like Mark Boslough,<sup>2</sup> who were just as unhappy with the theory. Having access to the super computers at Sandia Laboratory in Albuquerque, New Mexico, where he worked at the time, Boslough, who referred to the entire concept as “an impossible scenario,”<sup>3</sup> conducted simulations which indicated that the debris from the theorized comet could not have spread over “the proposed impact field.”<sup>4</sup> And, as far as debris from a single comet is concerned, we can only agree with him.

In addition to that, geological samples from the field that were subjected to further tests have been claimed not to conform to what was being theorized. Nanodiamonds were said to have been misidentified,<sup>5</sup> when not altogether absent as per Tyrone Daulton,<sup>6</sup> while carbon spherule samples were dated as being only 200 years old.<sup>7</sup> “It is all wrong,” claimed Wallace Broecker, who even said it was “very likely total nonsense.”<sup>8</sup>

The late dating of carbon spherules, however, means absolutely nothing since this was derived through the radiocarbon-dating method the reliability of which we have already put to rest. What, for instance, would these detractors want to make of those carbon samples that produced dates hundreds of years in the future?<sup>9</sup>

As far as nanodiamonds are concerned, less than one month after *Science Daily* claimed that none had been found by the theory’s detractors, it itself offered evidence that such diamonds had actually been discovered in the Greenland ice sheet, which finding was even noted by the same publication as adding credence to the cometary theory.<sup>10</sup>

What was worse, however, was the disclosure that Allen West, one of the foremost proponents of the Clovis Comet theory, was really Allen Whitt, a self-taught man without credentials who had been charged, fined, and convicted of masquerading as a state-licensed geologist before he adopted his new name.<sup>11</sup>

James Kennet hit back. Admitting that he and his team were “under a lot of duress” which made it all “quite painful,” he continued to insist that the work conducted by the theory’s critics was biased nonsense and all “screwed up.”<sup>12</sup>

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<sup>1</sup> P. Weiss, *et al.*, “Fossil Evidence Casts Doubt on Younger Dryas Impact Theory,” *agu.org/news/press* (June 16, 2010).

<sup>2</sup> R. Dalton, *loc. cit.*

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> “Impact Hypothesis Loses Its Sparkle,” *sciencedaily.com* (August 31, 2010).

<sup>7</sup> R. Dalton, *loc. cit.*

<sup>8</sup> *Ibid.*

<sup>9</sup> R. B. Firestone, “The Case for the Younger Dryas Extraterrestrial Impact Event: Mammoth, Megafauna, and Clovis Extinction, 12,900 Years Ago,” *Journal of Cosmology*, Vol. 2 (November 2009), pp. 256-285, available at *journalofcosmology.com* (November 10, 2009), pp. 11, 12 of 21.

<sup>10</sup> “Nanodiamonds Discovered in Greenland Ice Sheet Contribute to Evidence for Cosmic Impact,” *sciencedaily.com* (September 15, 2010).

<sup>11</sup> R. Dalton, *loc. cit.*

<sup>12</sup> *Ibid.*

West himself charged that it was “highly prejudicial and distorted” to bring up his legal past in criticizing the comet theory. He was honest enough in admitting to his earlier contravention, while both Firestone and Kennet continued to defend the work he had been doing on the cometary theory. Others, however, would have preferred a formal inquiry concerning the possibility of scientific misconduct.<sup>1</sup>

To us, the entire affair is nothing but an interesting curiosity—not to say a farce—that means little since we never accepted that the onset of the Younger Dryas had been due to the impact of a single comet or its scattered fragments.

## SECOND INTERLUDE

As we had done in our first volume of this series, we must continue to add information to, while also reshuffling, our set of hypotheses in order to keep the sequence of events in their proper chronological order. But because it would be tedious to reproduce the entire series at the end of each part of this work, we will only replicate the ones that require additional data together with those that continue to rely on them. New material will thus be found interspersed throughout the newly re-shuffled series, while, for the sake of chronological completeness, certain events discussed in earlier volumes of this series will also be included.

We start with Hypothesis #15 which originally read as follows: That, as the proto-Saturnian system drew closer to the present Sun’s domain of influence, their plasmaspheres came in contact with each other, electrical potentials clashed, and cosmic sparks began to fly.

To which we shall now add: Thus commenced a protracted series of rebounds, deviations, and crossovers of the respective plasma sheaths, with proto-Saturn emitting flashes of radiating light and heat at each and every contact, while also emitting clouds of dust, some of which beclouded the terrestrial atmosphere.

The hypotheses from #16 onward will therefore have to be renumbered since we now have to include additional ones, while introducing fresh information in some of the already existing ones. The *new* Hypothesis #16 will thus read: It was the sudden heat released by proto-Saturn’s outbursts in this series of plasmaspheric interactions that was directly responsible for the string of interglacials toward the end of the Pleistocene epoch. The reversal back to cold at the end of each interglacial was mainly due to proto-Saturn’s own return close to its previous temperature, while also aided to an extent by its temporary shielding by the accumulated dust in Earth’s atmosphere.

Hypothesis #17: That, eventually, proto-Saturn succeeded in penetrating the Sun’s heliosphere and, finding itself electrically imbalanced within this new domain, suffered a much more drastic disruption than its previous bursts of power.

Hypothesis #18: That the first signs of this electrical imbalance were manifested by the jet-like Birkeland column which joined proto-Saturn to Earth, which jet was seen to undergo a series of visible instabilities the likes of which mankind had never seen and which he commenced to reproduce in his sacred art down through the ages.

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<sup>1</sup> *Ibid.*



Hypothesis #19: That, following this series of awe-inspiring volatilities, the jet was seen to retract itself and disappear within the very proto-Saturnian orb that had originally spewed it forth.

Hypothesis #20: That, due to the disproportionate electrical energy between proto-Saturn and the Sun, the former flared up in a glorious burst of light that belittled its previous flares, while it dispelled the gloom, an event that went down in the mytho-history of mankind as Day One.

Hypothesis #21: That this major proto-Saturnian blast shed a vast amount of dust, belittling what it had shed in its previous minor outbursts, some of which dust was eventually captured in Earth's atmosphere due to gravitational attraction.

Hypothesis #22: That this super flare-up managed to scatter most of the detritus that had been contained within proto-Saturn's circumstellar disk, and that what remained formed a much less dense accumulation with a wide gap between its inner edge and the proto-Saturnian orb.

Hypothesis #23: That the flare-up was also responsible for the blowing away of Earth's auroral toroids together with a portion of the terrestrial atmosphere.

Hypothesis #24: That immediately upon and due to proto-Saturn's major flare-up, Earth and its inhabitants were subjected to an appalling heat-wave which caused worldwide forest fires while engulfing all and sundry in a tremendous sheet of cosmic radiation, including X-rays and other potentially harmful beams and particles.

Hypothesis #25: That the proto-Saturnian system's encounter with the Sun resulted in the reversal of Earth's magnetic field—or, more correctly, its dipole—which was due to the combined reaction of the Sun's super-flare-like discharge together with proto-Saturn's own flare-up. This culminated in a boost of the terrestrial field which would then have commenced to decay once more in its attempt to adjust to the Sun's own field of influence.

Hypothesis #26: That, very much like the Sun's flares achieve at present on a much smaller scale, proto-Saturn's flare-up braked Earth's rotational speed, with its former rate resuming not long after.

Hypothesis #27: That this temporary braking resulted in the oceans' incursion over large areas of the land as well as additional heat due to the friction between Earth's crustal layers which also caused tremendous tectonic activity including global volcanism, earthquakes, landslides, and various other upheavals.

Hypothesis #28: That, together with the emitted dust, proto-Saturn also expelled quantities of substantial rock-hard rubble some of which bombarded Earth, exploding in its atmosphere, the shards and bursts from which scarred the terrestrial surface in various localities with north-oriented craters some of which were later filled with water, plants, or both.

Hypothesis #29: That the calamities incurred by Earth throughout these events were responsible for great loss of life among both beasts and man. Vast hordes of animals which had existed during the Ice Age were completely exterminated, never again to grace the land or the oceans they once inhabited.

Hypothesis #30: That, despite the above, some species, including some of the mammoths, *did* manage to survive in isolated pockets just as tribal units of mankind also did.

Hypothesis #31: That the cosmic radiation released by proto-Saturn's flare-up would have also resulted in the birth of mutated offspring both among surviving animals and humankind, but that, with some possible exceptions, including racial diversions among humans, these mutations were not passed on to following generations.

Hypothesis #32: That, due to the ensuing heat-wave, the glaciers of the Pleistocene Ice Age commenced to melt, thus raising oceanic levels all over the world, while causing further floods and mud slides. Previous glaciated areas were thus reclaimed and, in time, the greening of these regions added tremendously to the habitability of Earth's northern hemisphere.

Hypothesis #33: Mainly due to proto-Saturn's return close to its previous cooler temperature, but partly aided by the enshrouding dust that had collected in the terrestrial atmosphere, Earth was once again plunged into a colder environment, that of the Younger Dryas, which was not, however, as freezingly cold as the Ice Age out of which it had emerged.

Hypothesis #34: That this series of events was remembered by those whom it touched and passed on to their descendants as a number of aborted attempts at what became known as the Creation, with each attempt having been thwarted due to a re-accumulation of terrestrial ice.

Hypothesis #34: That, with proto-Saturn's dust settling on the land, Earth returned to warmth as suddenly as it had temporarily slipped back into the cold.

# PART THREE

# Chapter 11

## Start of a New Era

### THE HIDDEN GOD

One of the main changes following proto-Saturn's flare-up that tended to bring survivors of diverse groups together were the very transformations that were occurring overhead. Having lived their entire life up to that point beneath a harmless static sky, what was now occurring in heaven's realm required both an explanation and an assurance that all would return to normal before long. No one really knew exactly what was happening, but each small group that met another might have thought the others knew. In those cases where language did not hamper communication, it is more than likely that these groups would have convened, making conversation, exchanging views, outlining plans how best to proceed amid the rubble of a broken land. While we shall never come close to knowing what went on in their minds, it seems reasonable to assume that various questions would have been asked. Having by then almost certainly decided that the shining orb in the sky was a live and active being, they would have done their best to understand what it was up to. Why, for instance, after having shed that glorious light, was it now hiding behind that film of loose material it seems to have disgorged?

An answer to the above conundrum does not seem to have been reached by ancient man, and, with the passage of time, it was simply taken for granted. That is the reason, as we previously noted, why the Hebrew name for "north," that is *tsaphon*, translates as "hidden," which word derives from a primitive root that means "to hide" or "to cover,"<sup>1</sup> since the north celestial pole was thereafter thought of as a place of hiding. Thus the Canaanite deity known as Baal Saphon, the same as Baal Tsaphon, is not only understood as Lord of the North,<sup>2</sup> but can also be rendered as the Hidden Lord.

In Egypt, Osiris/Saturn was not only known as "the mysterious one,"<sup>3</sup> but also lauded as the "hidden god."<sup>4</sup> Thus it was that, in gaining eternal life after death, King Unas was believed to have appeared "like to a god"<sup>5</sup> while "rising up in highest heaven,"<sup>6</sup> when he then became "hidden" like Osiris.<sup>7</sup>

Among the Egyptians, however, it was Amon who was venerated as the hidden god *par excellence*. In fact, the very name Amon, or Amen as some would have it, actually means the

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<sup>1</sup> J. Strong, *Dictionary of the Hebrew Bible* (Madison, N. J., 1890), pp. 100-101.

<sup>2</sup> W. F. Albright, *Yahweh and the Gods of Canaan* (N. Y., 1968), p. 127.

<sup>3</sup> J. T. Dennis, *The Burden of Isis* (London, 1910), p. 53.

<sup>4</sup> *Ibid.*, p. 54.

<sup>5</sup> D. A. Mackenzie, *Egyptian Myth and Legend* (N. Y., 1907/1978), p. 168.

<sup>6</sup> *Ibid.*, p. 170.

<sup>7</sup> *Ibid.*



“hidden one.”<sup>1</sup> It is unfortunate that this god was identified by Herodotus as Zeus/Jupiter,<sup>2</sup> which has caused later researchers to misrepresent him as the planet of that name.<sup>3</sup>

That Amon was known from primitive times there is no question,<sup>4</sup> even though, for quite a while, his influence seems to have been restricted to the ancient city of Thebes.<sup>5</sup> As transpired with various other Egyptian deities when local cults amalgamated into larger conclaves, Amon was later combined with his own alter-ego to become known as Amen-Ra. It is in one of the hymns to this conflated deity that we find him correctly lauded as the first-born god,<sup>6</sup> the establisher of Creation,<sup>7</sup> the lord of radiant light, and the creator of brilliant rays.<sup>8</sup> That his fusion with Ra does not equate him with the Sun, as others have mistakenly maintained,<sup>9</sup> is indicated when he is said to keep a watchful eye on men even “as they sleep,”<sup>10</sup> which makes of him a “sun of night,” a major designation of the proto-Saturnian god.<sup>11</sup>

Sokar was another Egyptian deity, worshipped mostly at Memphis, who was likewise regarded as a “hidden” god.<sup>12</sup> Memphis, however, also served as the principal center of worship for Ptah,<sup>13</sup> whose amalgamation with Osiris,<sup>14</sup> as well as other traits,<sup>15</sup> identify him as the same Saturnian deity. Additional to those traits is the god’s appellation of Ptah-Tenen,<sup>16</sup> which associates him with inertness, inactivity, rest, and lack of motion.<sup>17</sup> In conjunction with his being hailed as the illustrious Disk of Heaven,<sup>18</sup> the above pins him down—pun incidental—as the immobile Saturnian orb. And, in keeping with our present theme, he was also lauded as the Hidden One.<sup>19</sup>

As we have already seen, we come across similar allusions to the hiding of the Saturnian deity in Hindu mythology when we encounter Varuna as “the hidden ocean,” and Martanda as “the hidden, lost or dark sun.”<sup>20</sup>

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<sup>1</sup> E. A. W. Budge, *The Egyptian Book of the Dead* (N. Y., 1895/1967), p. cxxvi.

<sup>2</sup> Herodotus, *Historiae* II: 42; Diodorus Siculus, *Bibliotheca Historica* I:13:2.

<sup>3</sup> See, for instance, A. de Grazia, *Chaos and Creation* (Princeton, N. J., 1981), p. 198; I. Velikovsky, *Mankind in Amnesia* (N. Y., 1982), p. 96.

<sup>4</sup> E. A. W. Budge, *op. cit.*, p. 1.

<sup>5</sup> *Ibid.*, p. 3.

<sup>6</sup> *Ibid.*, p. 6.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*, p. 8.

<sup>9</sup> As, for instance, M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 138, among numerous others.

<sup>10</sup> E. A. W. Budge, *op. cit.*, p. 10.

<sup>11</sup> *God Star*, pp. 141-153.

<sup>12</sup> D. A. Mackenzie, *op. cit.*, p. 197.

<sup>13</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. 1 (N. Y., 1904/1969), p. 512.

<sup>14</sup> *Ibid.*, p. 507.

<sup>15</sup> See *God Star*, pp. 149, 194-196, 214, 225, 269, 274, 311.

<sup>16</sup> E. A. W. Budge, *op. cit.*, p. 508.

<sup>17</sup> *Ibid.*, p. 509.

<sup>18</sup> *Ibid.*

<sup>19</sup> *Ibid.*, p. 512.

<sup>20</sup> G. de Santillana & H. von Dechend, *Hamlet's Mill: An essay on Myth and the Frame of Time* (Boston, 1969), p. 265; J. Herbert, “India: The Eternal Cycle,” *Larousse World Mythology* (London, 1972), p. 233.



Amon (Amun/Amen) as depicted on one of the columns  
in his temple at Karnak.  
(Photograph by the author.)

Utu, the so-called Sun-god which the Hittites adopted from the Sumerians, was also said to have temporarily disappeared.<sup>1</sup> He is said to have gone into the “night” with which he is said to have blended.<sup>2</sup>

Despite its fragmentary nature, the above myth’s tie-in with the events of the Younger Dryas is evidenced by the traits it has managed to preserve within its controversial lines. One of these consists of the statement that “on the way” to wherever Utu disappeared, “there was no cold.”<sup>3</sup> Enigmatic as this declaration might appear to others, it is quite clear to us since, as we now know, the cold associated with the event actually gripped Earth *after* proto-Saturn became hidden.

In one version of the same myth, it is also stated that this disappearance was accompanied by “disastrous consequences” which included “an unnatural, unbearable heat” that culminated in a raging fire.<sup>4</sup>

A similar myth also comes to us from the Tupi Indians of Brazil who tell of Monau, he who is “without beginning or end, author of all that is.” Because of “the ingratitude of men, and their contempt for him,” he “withdrew from them and sent upon them *tata*, the divine fire, which burned all that was on the surface of the earth.”<sup>5</sup>

A further thing we notice here is man’s predisposition to blame himself for heaven’s displeasure which, in time, led to dire consequences some of which remain with us to this very day.

What is additionally strange is that man never did find out what it really was that supposedly angered what came to be his God. Despite the violent death of many, man’s continued existence in face of God’s displeasure was then reasoned to have been due to the same God’s compassion. It was thus said that Monau “was so filled with pity” that he quenched the fire by pouring a “deluging rain” which has been said to have also formed the ocean.<sup>6</sup>

That a “deluging rain” quenched out the forest fires we have discussed in previous pages, as we have seen, is understandable. The forming of the ocean, however, is based on the misconceptions inherent in translation. The Tupi word used here is *parana*, which actually means “great waters.”<sup>7</sup> What seems to lie behind this declaration is the drowning of vast stretches by the rising seas due to the melting glaciers, so that where once there had been land, there were now expanses of “great waters.”

In accordance with the tremendous geological upheavals that ensued, it is also said that, “in places,” Monau “raised mountains, and in others [he] dug valleys.”<sup>8</sup>

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<sup>1</sup> H. C. Melchert, “Hittite *antaka*—“loins” and an Overlooked Myth About Fire,” in G. Beckman, *et al.*, (Editors), *Hittite Studies in Honor of Harry A. Hoffner Jr. on the Occasion of His 65th Birthday* (Winona Lake, Indiana, 2003), p. 281.

<sup>2</sup> *Ibid.*, p. 284.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, p. 285.

<sup>5</sup> D. G. Brinton, *Myths of the New World* (Philadelphia, 1896), p. 227.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*



## THE PAUT

The hiding of the proto-Saturnian sun by the very debris that it itself expelled is more than intimated in the Egyptian papyrus of Nesi-Khensu in which Amen-Ra is addressed as the “one who hideth himself *from that which cometh forth from him.*”<sup>1</sup>

Among the ancient Egyptians, this debris was often referred to as “divine matter.” As it is stated in the same papyrus, the “holy god, the lord of all the gods, Amen-Ra” is “the holy soul who came into being in the beginning.” He was “the great god...*the first divine matter which gave birth unto subsequent divine matter.*”<sup>2</sup>

This divine matter was also referred to as *paut*, which, simply put, means “stuff” or “substance,” identified further as “the matter or material of which anything is made.”<sup>3</sup> The relation of this matter to the ancient event which first gave it existence is indicated by derivations such as *paut ta* (but also simply *pa-t*) which means “primeval time” or “remote ages,”<sup>4</sup> and *pauti tauī*, “the beginning of time” and “the creation.”<sup>5</sup> The very title of Pauti, which translates as “the primeval god,” was thus bestowed on Amen-Ra.<sup>6</sup>

Osiris, too, was related to the *paut*. In the Papyrus of Nes-Amsu (also known as Nes-Min), Neb-er-tcher, the Creator, is made to say: “My name is Ausares (i.e. Osiris)...the primeval matter [*pautet*] of primeval matter [*pautit*].”<sup>7</sup>

## THE DARK AND EVIL DEITY

In view of all that we have so far disclosed, it should not surprise anyone that the original god of mankind would have been considered anything but good. Much later in time, one of ancient Rome’s most famous poets, Marcus Annaeus Lucanus, popularly known simply as Lucan, could still speak of the planetary god in question as the baleful Saturn while referring to his frigid nature in one and the same breath.<sup>8</sup>

The malignant nature of the planet Saturn, however, was believed in by various ancient nations way before the Romans. The Jews had for long branded the planet as “the star of evil which brings misfortune to Israel.”<sup>9</sup> Despite the fact that they held the Sabbath, which is Saturday, or Saturn’s Day, to be holy, they also deemed that day to be unlucky.<sup>10</sup> They thus believed that any work done on that day would bring nothing but bad luck.<sup>11</sup>

Anthony Aveni might not have understood what lies behind this ancient belief, but he was

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<sup>1</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. 2 (N. Y., 1904/1969), p. 15 (emphasis added).

<sup>2</sup> *Ibid.*, p. 13 (emphasis added).

<sup>3</sup> *Idem*, *An Egyptian Hieroglyphic Dictionary*, Vol. 1 (N. Y., 1920/1978), p. 230.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, p. 231.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Idem*, *The Gods of the Egyptians*, Vol. 1 (N. Y., 1904/1969), p. 300.

<sup>8</sup> Marcus Annaeus Lucanus, *Pharsalia*, I:720.

<sup>9</sup> L. Ginzberg, *The Legends of the Jews*, Vol. V (Philadelphia, 1968), p. 135.

<sup>10</sup> *Ibid.*, p. 405.

<sup>11</sup> *Ibid.*



well aware of it. Saturn, he rightly noted, was “acknowledged by universal experience to be the most potent, evil, and malignant of all the planets.”<sup>1</sup>

Saturn’s malignant nature was taken further—perhaps too far—by the Persian religious reformer, Zarathustra (also known as Zoroaster), in his rehabilitation of the god Ahura Mazda who, by his time, had become almost forgotten. Despite the fact that this took place in the seventh century B. C., this god had probably been worshipped in the highlands of Persia in more ancient times.<sup>2</sup>

Ahura Mazda’s astral nature is indicated by the star-spangled robe he is sometimes shown to be wearing.<sup>3</sup> His real identity, however, has remained immersed in shadows. In the tomb of Antiochus I of Commagene, on the summit of Nemrud Dag, in southern Turkey, a variation of the god’s name happens to be combined with that of the Greek Zeus.<sup>4</sup> As in the case of the Egyptian god Amon, this has occasioned some researchers to identify Ahura Mazda as the planet Jupiter.<sup>5</sup> It very often seems to be forgotten that the Greeks, and after them the Romans, had a penchant for equating the foremost deities of other nations with their own chief god, the mighty Zeus or Jupiter.

What is perhaps even worse is the identity with the Sun that some have sought to advance,<sup>6</sup> which equation is sometimes said to rest on Ahura Mazda’s relation to the Indian god Varuna.<sup>7</sup> As we, however, have seen and will continue to, Varuna’s Saturnian characteristics are well defined. If there therefore is a correlation between Varuna and Ahura Mazda, the Persian deity must translate as the same proto-planetary sun. In this respect, however, an association with Varuna is not even required.

Although the meaning of the name Ahura Mazda has been much disputed,<sup>8</sup> its rendition as Wise Lord (or Lord Wisdom) remains the favored view.<sup>9</sup> Together with other Saturnian deities, he was regarded as “the creator god and lord of light.”<sup>10</sup> He is said to have come into being from some “great emptiness,”<sup>11</sup> although he was also believed to have been uncreated.<sup>12</sup> Since he was considered to have been the originator of all that is, he was therefore believed to have created both the darkness and the light and, as with the Saturnian deities of other nations, he was correspondingly assumed to be a dangerous god.<sup>13</sup>

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<sup>1</sup> A. Aveni, *Conversing With the Planets* (Boulder, Colorado, 2002), p. 143.

<sup>2</sup> C. A. Burland, *Myths of Life and Death* (N. Y., 1974), p. 117.

<sup>3</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 145.

<sup>4</sup> *Idem*, *Skywatchers, Shamans & Kings* (N. Y., 1997), p. 282.

<sup>5</sup> See here, for instance, D. Talbott, “From Myth to a Physical Model,” *AEON* III:3 (October 1993), p. 27.

<sup>6</sup> As, for instance, C. A. Burland, *op. cit.*, p. 119.

<sup>7</sup> S. Konow, “A Note on the Sakas and Zoroastrianism,” *Oriental Studies in Honour of Cursetji Erachji Pavry* (Oxford, 1993), p. 222; M. Eliade, *op. cit.*, p. 72; E. C. Krupp, *Beyond the Blue Horizon* (see above), p. 145.

<sup>8</sup> P. Masson-Oursel & L. Morin, “Mythology of Ancient Persia,” *New Larousse Encyclopedia of Mythology* (London, 1972), p. 312.

<sup>9</sup> M. Eliade, *loc. cit.*; E. C. Krupp, *loc. cit.*; J. W. Perry, *Lord of the Four Quarters* (N. Y., 1970), p. 135.

<sup>10</sup> E. C. Krupp, *loc. cit.*

<sup>11</sup> C. A. Burland, *op. cit.*, p. 118.

<sup>12</sup> P. Masson-Oursel & L. Morin, *op. cit.*, p. 318.

<sup>13</sup> C. A. Burland, *loc. cit.*

It was as the creator of the opposing light and darkness that marked Ahura Mazda as a dual deity, the good aspect of whom became known as Spenta Mainyu, with Angra Mainyu as the evil one.<sup>1</sup> Originating as part and parcel of the same deity,<sup>2</sup> in time these aspects changed into separate gods, where the benign one retained the name Ahura Mazda, while the evil side was renamed Ahriman.<sup>3</sup> It was then preached that these two gods are locked in a perpetual contest until, in the far off future, the light will conquer the darkness—that is good will defeat evil—resulting in the final triumph of Ahura Mazda.<sup>4</sup>

This philosophical conviction serves as a good example concerning the evolution of religious belief from an actual event into a convoluted, even if morally uplifting, faith. What is regrettable is that this particular development was ably buried by Zarathustra through his successful reformation.<sup>5</sup> As Cottie Burland informs us, the original myths behind the cult of Ahura Mazda's duality are now lost to us.<sup>6</sup> Defining Ahura Mazda broadly as a sky god, Mircea Eliade likewise complained that we have "far too little" of the initial myths "to be able to reconstruct the original figure" of the deity.<sup>7</sup> Despite all that, however, origin can still be sought within what's left of Mazda's ancient lore.

Although in later times it was forgotten why, but still in keeping with our major thesis, Angra Mainyu, the god's dark side, was said to have descended from the north.<sup>8</sup> As told of Jesus in relation to Satan many years later, the spirit of darkness is here said to have appeared to Zarathustra in order to tempt him.<sup>9</sup>

What is of more importance to us, however, is that the amalgamation of Saturn's malignant nature and its frigidity is not restricted to Lucan's poetry. In ancient times it not only seems that cold went hand in hand with evil, but that, in fact, it was believed to be its very motivation. As it was written, while Ahura Mazda was the instigator of a benign creation, Angra Mainyu, his evil half, was the originator of one "which is all death, where there were only two months of summer and where winter is ten months long, months which so chill the earth that even the summer months are icy."<sup>10</sup>

By the time of the Sassanid Empire, somewhere between the third and seventh centuries A. D., when the above was put into writing, it was not always kept in mind that Creation had occurred during a time bereft of seasons. Notice, however, that in order to reconcile this with the little that was still remembered, not only are spring and fall entirely omitted, not only is winter said to have been much longer than summer, but summer itself is said to have been as cold as winter. Where, then, the seasons? More than that, however, we find it still retained, as

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<sup>1</sup> C. Huart, "The Mythology of Persia," *Asiatic Mythology* (N. Y., 1972), p. 41.

<sup>2</sup> J. W. Perry, *loc. cit.*

<sup>3</sup> C. Huart, *op. cit.*, p. 42.

<sup>4</sup> *Ibid.*, p. 41.

<sup>5</sup> M. Eliade, *op. cit.*, p. 74.

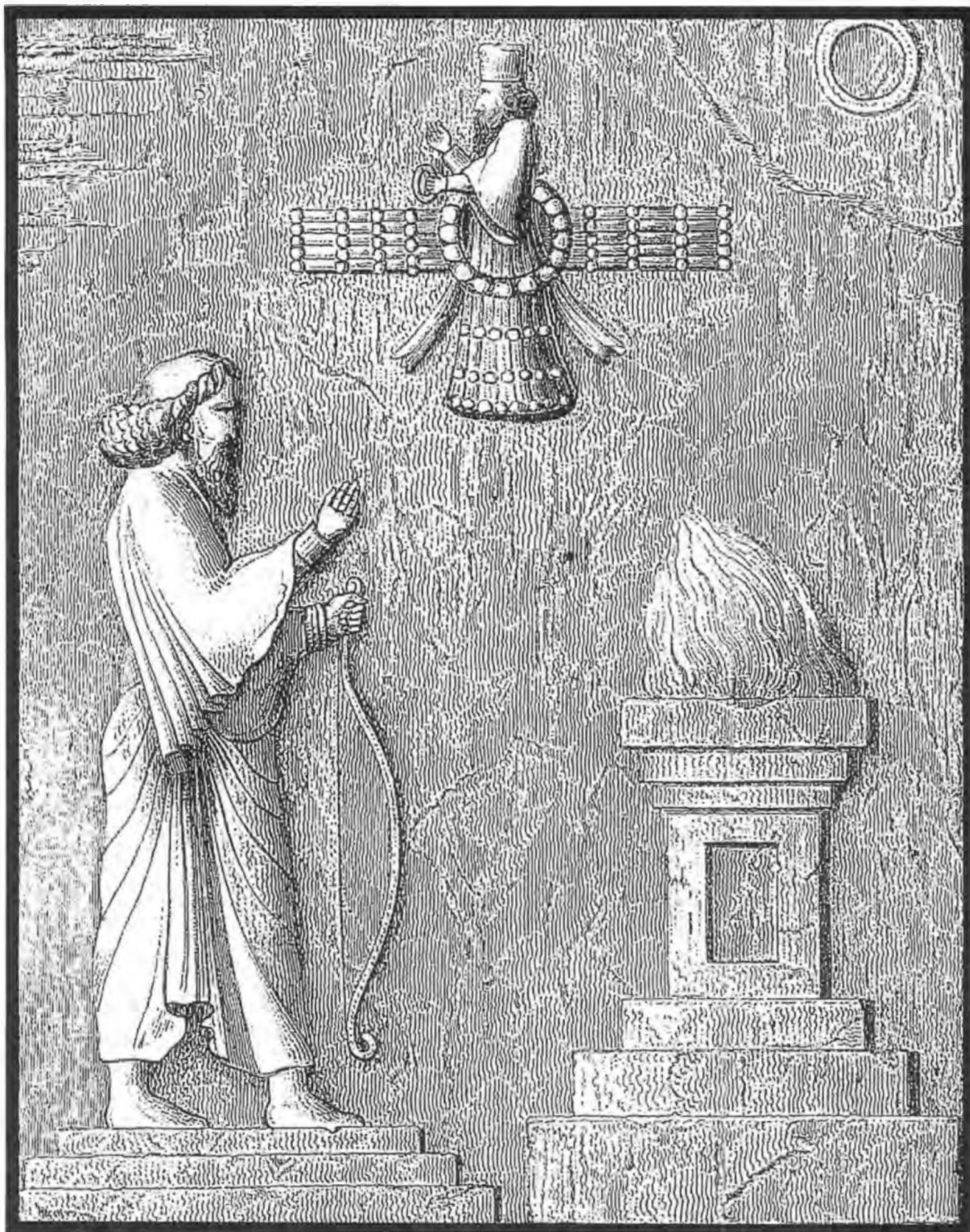
<sup>6</sup> C. A. Burland, *op. cit.*, p. 119.

<sup>7</sup> M. Eliade, *loc. cit.*

<sup>8</sup> P. Masson-Oursel & L. Morin, *op. cit.*, p. 312.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*, p. 316.



Emblem of Ahura Mazda above a Persian fire worshipper.

stated in the same tract, that “cold is the root of all evil.”<sup>1</sup>

Bearing in mind that the cold came from the darkened proto-Saturnian sun, and that darkness was, as it still is by some, considered an adverse circumstance, the above is understandable. But to what extent was the proto-Saturnian sun really darkened when it was hidden behind the primeval matter it had ejected? Did it entirely disappear or was it still discernible?

## THE BLACK PLANET AND ITS GOD

The Navajo Indians have long symbolically associated the north with the color black.<sup>2</sup> It was not, however, just the north, which had served as the proto-Saturnian deity’s celestial abode, that was linked to this particular shade. The “principal deity” of the same tribe, the very “creator of fire and light,” was himself venerated as the Black God.<sup>3</sup> As we noted in a previous chapter of this very work, the association of the color black with the Saturnian deity is found embedded in the myths of various ancient cultures.<sup>4</sup> This is also reflected in archaic astral lore where we find that Saturn was often referred to as the “dark” or “black” planet.<sup>5</sup>

Much earlier, in Babylon, the planet in question had already been deified as “the Black Saturn,”<sup>6</sup> or “the Black Star.”<sup>7</sup> Even in Egypt, despite the fact that he was generally portrayed as of a green color, the Saturnian Osiris was often described as having been black.<sup>8</sup> As mentioned in an ancient hymn, the “Black One” is a well known reference to Osiris.<sup>9</sup> That the black color of this deity was widely known is ably demonstrated by Plutarch, the Greek biographer and moral philosopher, in one of his major works.<sup>10</sup>

India was—in some respects still is—no different. Among the astrologers of this ancient nation, as elsewhere in archaic lore, Saturn is also considered a maleficent planet.<sup>11</sup> So, likewise, is the planetary god of the same name described as irascible, evil, malicious, and even flatulent.<sup>12</sup>

In keeping with our present theme, the same deity is presented as “a tall black man”<sup>13</sup> and

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<sup>1</sup> *Ibid.*

<sup>2</sup> C. Calloway, *et al.*, *Through Indian Eyes* (Montreal, 1996), p. 111.

<sup>3</sup> A. F. Aveni, “Astronomy in Ancient Mesoamerica,” in E. C. Krupp, *In Search of Ancient Astronomy* (N. Y., 1977), p. 174.

<sup>4</sup> J. Schaumberger, *Sternkunde und Sterndienst in Babel* (Munster, 1935), p. 317; al-Biruni, *Kitab at-Tafhim* (London 1934 edition by R. R. Wright), p. 240.

<sup>5</sup> H. Lewy, “Origin and Significance of the Mâgên Dâwîd,” *Archiv Orientalni*, 18, Pt. 3 (1950), pp. 339, 348.

<sup>6</sup> D. A. Mackenzie, *Myths of Babylonia and assyria* (London, 1915), reprinted as *Mythology of the Babylonian People* (London, 1996), pp. 313, 314.

<sup>7</sup> A. Scherer, *Gestirnnamen bei den Indogermanischen Volkern* (Heidelberg, 1953), pp. 85-85, as cited by E. Cochrane, “Indra’s Theft of the Sun-God’s Wheel,” *AEON* III:3 (October 1993), p. 71.

<sup>8</sup> W. A. Heidel, *The Day of Yahweh* (N. Y., 1929), p. 452.

<sup>9</sup> R. T. R. Clark, *Myth and Symbol in Ancient Egypt* (London, 1978), p. 194.

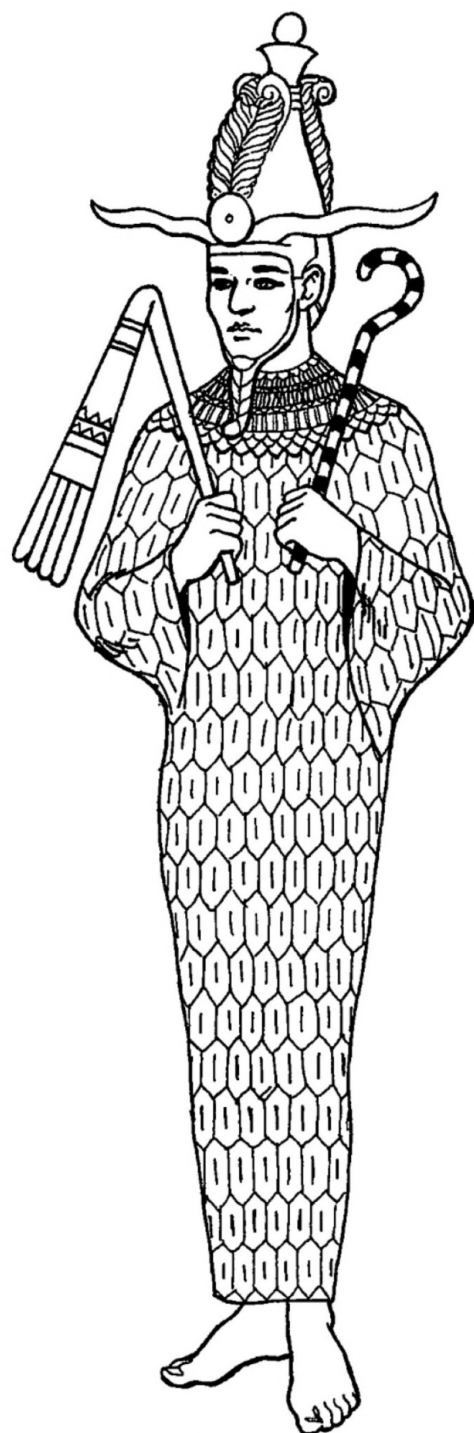
<sup>10</sup> Plutarch, *De Iside et Osiride*, 22, 30-31, 33, 73.

<sup>11</sup> D. Pingree, “Representation of the Planets in Indian Astrology,” *Indo-Iranian Journal*, Vol. 8 (1964-65), p. 232.

<sup>12</sup> *Ibid.*, pp. 257, 260, 262.

<sup>13</sup> *Ibid.*, p. 260.





**Although usually portrayed with green skin, Osiris, shown above,  
was also often described as having been black.  
(Illustration by Tom Tierney.)**

of a dark nature.<sup>1</sup> He is even said to wear “black garments.”<sup>2</sup> Anyone born under the planet’s influence, it is written, would also possess a “very black” body.<sup>3</sup>

The above Saturnian characteristics are lifted from various sections of the *Yavanajataka* of the third century A. D.,<sup>4</sup> but the astrological section of the much older *Narada Purana*—also known as *Naradeya Purana*—is just as insistent in describing the planet in question as jet black.<sup>5</sup> Even outside astrology, the planet Saturn, the most common Sanskrit name of which is Shani, is depicted as having been of a black color.<sup>6</sup> Another Sanskrit name for the same planet is Kala<sup>7</sup> (not to be confused with Kali), which name also translates as “black.”<sup>8</sup>

Kala also serves as an alias of Shiva, turning him into “The Black One,”<sup>9</sup> which is in keeping with other Saturnian avatars.<sup>10</sup> The same can be said for Surya, whom we have met on an earlier page, when he is supplied with the epithet *asita* which can likewise be translated as “dark” and even “black.”<sup>11</sup>

Someone else we have met on an earlier page in this respect is the “old black god” of the Maya, Itzamna, who has also been identified as the Saturnian deity,<sup>12</sup> which goes to show that this belief was just as common in the New World.

In fact, the association of the color black with the Saturnian planet was so obsessive in the ancient world that, much later in Medieval times, the black color utilized in blazoning the heraldic arms of sovereign princes was still being referred to as “Saturn.”<sup>13</sup>

## THE KA’BA

Although he lived around the same time, Mohammed was less successful than Zarathustra in obliterating the worship of the black Saturnian god and planet. Not that he did not try, but, in holding on to various items of the old planetary religion in order not to alienate too many would-be converters to the new faith he was espousing, the veil he managed to cast upon the old Saturnian deity turned out to be a little too transparent.

As in other places around the world, planetary worship continued to be rampant in Arabia well after the advent of monotheistic faiths. Not only was the planet Venus, under the name al-Uzza, still being venerated down into, and even past, the seventh century of the modern

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<sup>1</sup> *Ibid.*, pp. 262, 267.

<sup>2</sup> *Ibid.*, pp. 257, 262, 267.

<sup>3</sup> *Ibid.*, p. 258.

<sup>4</sup> *Ibid.*, p. 250.

<sup>5</sup> G. V. Tagare (trans.), *The Narada Purana*, Vol II (Delhi, 1981), p. 725.

<sup>6</sup> V. S. Apte, *The Practical Sanskrit-English Dictionary* (Delhi, 1965), pp. 906-907.

<sup>7</sup> *Ibid.*, p. 353.

<sup>8</sup> *Ibid.*

<sup>9</sup> H. Zimmer, *Myths and Symbols in Indian Art and Civilization* (Princeton, 1974), p. 155.

<sup>10</sup> For Shiva as Saturn check *Flare Star*, pp. 227-245, 248, 283, 289, 306, 313.

<sup>11</sup> M. Williams, *A Sanskrit-English Dictionary* (Oxford, 1872), p. 105.

<sup>12</sup> D. H. Kelly, “Planetary Data on Caracol Stela 3; i A. Aveni (Ed.) *Archaeoastronomy in Pre-Columbian America* (Texas, 1975), p. 259.

<sup>13</sup> See, for instance, N. Webster, *Twentieth-Century Dictionary of the English Language* (N. Y., 1939), p. 1475.

era,<sup>1</sup> but, as we shall soon see, so was the planet Saturn.

Islam's most holy city, now open only to Muslims, is Mecca, the life of which revolves around the Ka'ba, a small shrine of cemented rough stones constructed in the shape of a cube for which it is said to be named. It boasts a single doorway, now barred by a gold and silver portico which is opened annually for the washing of the shrine's interior during the *hajj*. This door is roughly eight feet above ground level due to the solid plinth of large rough stones which forms the lower part of the structure. It leads into a single room which is empty save for a staircase in the corner which leads to the flat roof.

Two foreign stones are set into the eastern and southern exterior corners of the shrine—the Black Stone and the Yamani Stone, the former being the more famous of the two. Roughly twelve inches in diameter, this Black Stone is set in a silver plaque cemented to the corner.

This shrine is all but completely encased within the *kiswah*, a tightly encircling curtain of black cloth embroidered with Koranic verses which is renewed each year. The *kiswah* is slightly drawn up at the bottom to reveal the base of the Ka'ba, the door, and the two holy stones.

Today, the small building rests within the vast courtyard of the Great or Sacred Mosque, al-Masjid al Haram, an imposing edifice boasting seven minarets.

Concerning this humble shrine, Mohammed himself dictated that all Muslims, no matter where they may be, should turn their face toward Mecca and the Ka'ba when they pray. These words of his have been among the most effective ones ever uttered by a religious founder. *Hundreds of millions* of Muslims, a great proportion of humanity, from all over the world, turn toward this holy place in prayer *five times each day*.<sup>2</sup>

During the *hajj*, the pilgrimage to Mecca that every Muslim must attempt once in his life, thousands of Muslims perform the prescribed *tawaf*—an anti-clockwise circumambulation enacted *en masse* seven times around the Ka'ba—three times at a brisk pace, and four more times at a slower one. During this frenzied circling, individuals vie in trying to kiss, or at least touch, the Black and/or Yamani Stone.

A certificate given to every *hajji*, bearing depictions of Mecca's holy sites, was, and perhaps still is, looked upon "almost as a passport to heaven."<sup>3</sup>

As Mohammed Abdul-Rauf, former Director of the Islamic Center in Washington, D. C., wrote in 1978:

"Why this veneration of a stark cubelike building of gray stone? It is not a striking piece of art, nor is it adorned with precious stones [although its door *is* of silver and gold]. And no Muslim endows it with power to benefit or to hurt."<sup>4</sup>

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<sup>1</sup> P. K. Hitti, *History of the Arabs* (1937), pp. 98 ff.; J. Wellhausen, *Reste Arabischen Heidentums* (1897 second edition), pp. 40-44; C. M. Doughty, *Travels in Arabia Deserta*, Vol. II (1921 new edition), p. 516.

<sup>2</sup> In 1978, M. Abdul-Rauf vouched for *eight hundred million* Muslims, *one fifth of all humanity*. See his "Pilgrimage to Mecca," *National Geographic* (November 1978), p. 587. That number has since increased tremendously.

<sup>3</sup> P. Hamilton, *Seas of Sand* (London, 1971), pp. 32-33.

<sup>4</sup> M. Abdul-Rauf, *op. cit.*, p. 584.

As modern Muslims will avow, the Ka'ba is venerated because it is the house of God, whom they refer to as Allah, which is said to have been built by Ibrahim, the Hebrew patriarch Abraham. It was quite close to it that the Prophet Mohammed was born. And while it has been destroyed by floods many times in the past, it was each time reconstructed to conform to its original cubic shape. The venerated Black Stone is believed to be the only remaining fragment from Abraham's original shrine.

The shrine had not always been empty. When, in 630 A. D., Mohammed claimed it as his own, it housed an assembly of idols which are now explained by Muslims as a lapse of the true faith since Abraham's time. Mohammed had the idols toppled in a "cleansing" of the shrine, a rededication of the Ka'ba to what he then believed was the original and true god.

Dissatisfied with the polytheism practiced in his country, as well as elsewhere, and influenced by the Jewish and Christian belief in one god, Mohammed, who up till then had been a merchant, became convinced he was selected by his god to carry the message of his truth to the entire world. He was forty years of age when he began to preach his newly acquired religious convictions.

Mecca had, however, been a holy city long before Mohammed. The city was even said to have grown around the Ka'ba which had existed from ancient times. Such shrines were often built in otherwise deserted places to be visited only during times of veneration. When such shrines gained popularity, it was common for towns to grow around them. Arabs from all over the land had pilgrimaged to Mecca to worship at the Ka'ba from remote antiquity. The *tawaf*, or sevenfold circumambulation, also dates from before the Prophet's time.<sup>1</sup> Nor had the Meccan Ka'ba been the only cubic shrine in the Arabian countryside. There had once been a Ka'ba at Najran, one at Khalasa, and another at San'a. Like the Meccan Ka'ba, each one of them used to be the center of a *hajj* and the *tawaf*.<sup>2</sup>

Mohammed himself came from a reputable family of the Koreish, the then dominant tribe in Mecca. The Koreish had long been the traditional custodians of the Ka'ba and its idols. They also used to be the concessionaries of the pre-Islamic *hajj*. Mohammed's own grandfather must have been a man of means since it was he who endowed the Ka'ba with a gilt door.<sup>3</sup> Whether this is the same gilt and silvered door that exists today is not quite known. When Mohammed took over the Ka'ba in the name of Islam, which word really means "Submission," he was thus reclaiming his own heritage.

There seems to be a slight difference of opinion concerning the principal deity that was housed in the Meccan Ka'ba prior to Mohammed's religious revolution. According to Francois Lenormant, the Ka'ba's main idol had originally been a wooden dove suspended from the ceiling. Since the dove had for long been a symbol of Venus, Lenormant considered the pre-Islamic cult of the Ka'ba to have been devoted to that planetary goddess. He even went so far as to state it was the planet Venus that the Black Stone personified.<sup>4</sup>

Most Arabian writers have it differently. More than that, their information compares more

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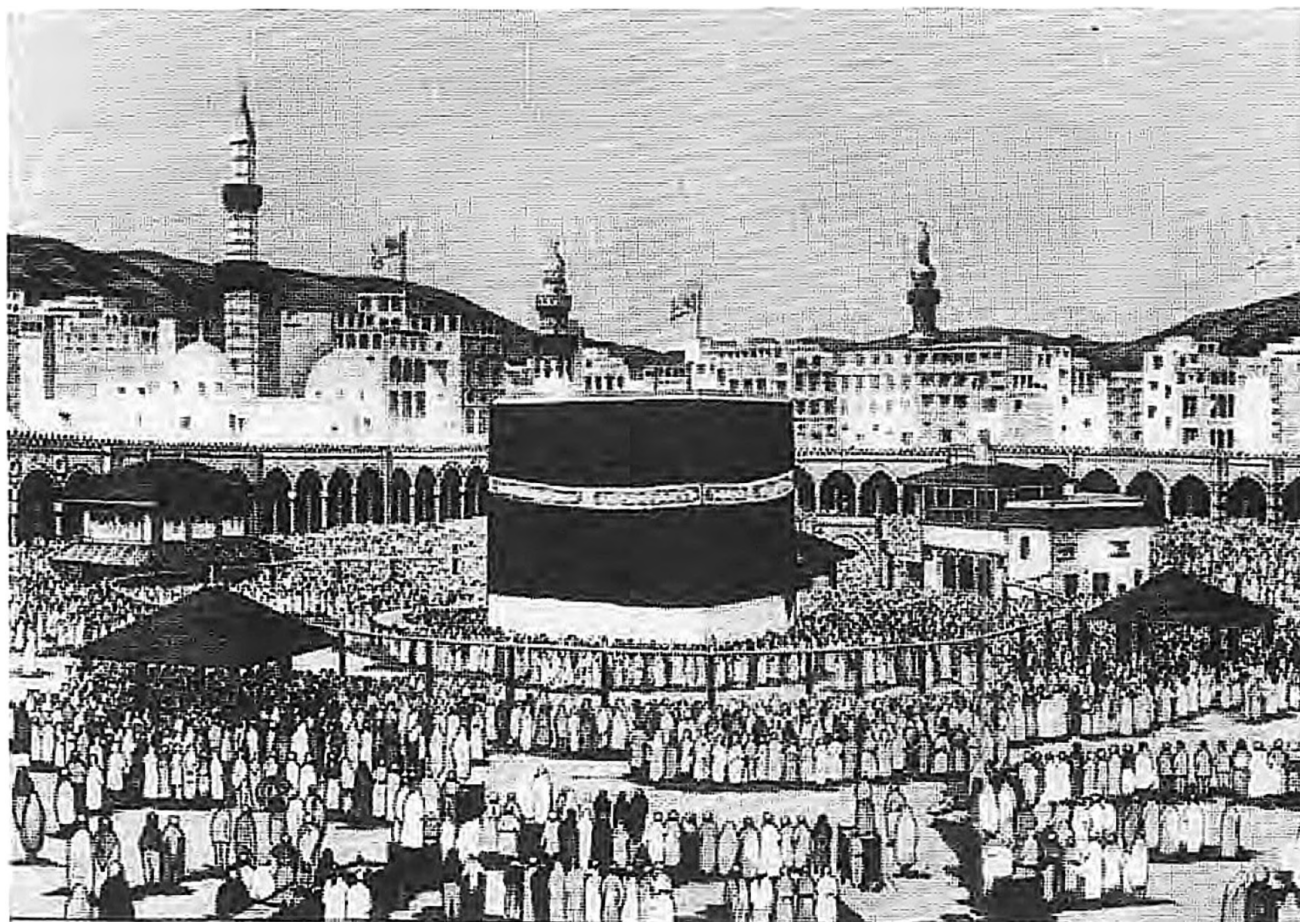
<sup>1</sup> J. Huxley, *et al.*, *The Ancient World* (London, 1968), p. 96.

<sup>2</sup> H. St. J. B. Philby, "Mecca," *Encyclopaedia Britannica*, Vol. 15 (1959 edition), p. 150B.

<sup>3</sup> Macoudi (Masudi), *Les Prairies d'Or*, Vol. III (Paris, 1861/1877), p. 259.

<sup>4</sup> F. Lenormant, *Lettres Assyriologiques*, Vol. II (1871-1872), pp. 138 ff.





The Ka'ba.

favorably with what is known of ancient Near Eastern cults. Without wishing to cast doubt on Lenormant's description of the Venerian dove, we cannot accept the Ka'ba as a Venerian shrine, or the Black Stone as a Venerian idol.

Within the Ka'ba,<sup>1</sup> or, as others would have it, perched upon its roof,<sup>2</sup> stood the figure of the god Hubal, considered the greatest of all Arabian idols.<sup>3</sup> And it is here that the truth begins to emerge for, as Hildegard Lewy pointed out, Hubal was the god of the planet Saturn.<sup>4</sup> This is not to say that Venus, as a dove, was not also worshipped since, as we have already noted, under the name al-Uzza, this planetary goddess remained prominent in Arabia well into, and even past, Mohammed's time.

Additional to that, for some now forgotten reason, the cube itself had been a traditional representation of the god and planet Saturn from ages past.<sup>5</sup> Even Johannes Kepler, in his *Mysterium Cosmographicum*, drew on this lore. His Polyhedra, a geometrical fancy meant to

<sup>1</sup> Tabari, *Annals*—(more correctly, *Tarikh ur-Rasul wal-Muluk*, which translates as *History of the Prophets and Kings*)—Vol. I (Leiden, 1881-1882), p. 1075.

<sup>2</sup> H. Lewy, *op. cit.*, p. 340.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> See, for instance, G. de Santillana H. von Dechend, *op. cit.*, pp. 221-222.

depict the correspondence of the relation between planetary orbital radii, represents Saturn's sphere by a cube—"witness of an age-old tradition."<sup>1</sup>

What clinches the matter is that the cube was the characteristic shape of Saturnian temples.<sup>2</sup> To be sure, it was quite known to the Arabian historian Masudi<sup>3</sup> that the Meccan Ka'ba used to be a shrine to Saturn.<sup>4</sup> And, in keeping with our present subject, while the Ka'ba is not itself black, it is *rendered* black by the encasing of the *kiswah* which is of that very color. That this is not an idle assertion is proven by ad-Dimisqi who described the building of a temple to Saturn with "black (being the color) of the stone work *and the curtains*."<sup>5</sup> In fact, this same author listed black curtains as one of the most typical traits of Saturnian temples.<sup>6</sup>

## THE BLACK STONE

The Black Stone had not always been cemented to the south-east corner of the Ka'ba. It was Mohammed who placed it there. In pre-Islamic times, the Black Stone had been placed across the mouth of a well that used to be located *inside* the Ka'ba. According to the famed Arabian traveler and geographer, al-Biruni, pilgrims used to quench their thirst at its waters.<sup>7</sup>

It has been said by some that the number of idols that the Ka'ba used to contain numbered 360,<sup>8</sup> although it is possible that most of them were merely votive offerings.<sup>9</sup> When Mohammed destroyed these idols, he saved the Black Stone,<sup>10</sup> which he then blessed,<sup>11</sup> and incorporated into the faith of Islam.

To the Arabs of pre-Islamic times, the Black Stone was itself considered a deity. More than that, it was regarded as the protector of the rest of the gods.<sup>12</sup> The Black Stone must therefore be considered as having been the chief deity within the Ka'ba. In fact, it seems that the figure of Hubal only replaced it when the Stone was temporarily lost. That being the case, it was the Black Stone that would have really been Hubal. It was the Black Stone that would have represented Saturn.

As we have already noted, the Meccan Ka'ba had been destroyed by floods and rebuilt many times. These catastrophic inundations, which have frequently plagued the valley of Mecca, are capable of generating wholesale destruction through their violent torrents. These floods have been known to carry away whatever happens to lie in their path, usually leaving a

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<sup>1</sup> *Ibid.*

<sup>2</sup> H. Lewy, *op. cit.*, p. 339.

<sup>3</sup> In full, Abu 'L-Hassan ibn Husein ibn Ali-ul-Masudi.

<sup>4</sup> H. Lewy, *loc. cit.*

<sup>5</sup> ad-Dimisqi, *Kitab Nuhba al-Dahr fi Agaib al-Barr w'al Bahr* (St. Petersburg, 1866), p. 40.

<sup>6</sup> *Ibid.*

<sup>7</sup> G. de Santillana & H. von Dechend, *lo. cit.*

<sup>8</sup> G. Annequin, *Little-Known Civilizations of the Red Sea* (Geneva, 1979), p. 205; H. Lewy, *op. cit.*, pp. 341-342.

<sup>9</sup> *Ibid.*

<sup>10</sup> S. Welles, *et al.*, *The World's Great Religions* (N. Y., 1957), p. 101.

<sup>11</sup> P. Hamilton, *op. cit.*, p. 31; J. Huxley, *et al.*, *op. cit.*, p. 97.

<sup>12</sup> *Ibid.*, p. 96.

deep layer of mud in their wake.<sup>1</sup> During one of these floods, not only was the Ka'ba swept away, its foundations were completely obliterated. Masudi described the site of the shrine after its destruction as nothing but a heap of sand.<sup>2</sup> When the Ka'ba was next rebuilt, it was erected on a new foundation. The well that had been inside it, sealed off by the mud, was not found. Neither was the Black Stone which had been placed across its mouth.<sup>3</sup> Mecca had lost its god.

According to Lewy, it was then that the statue of Hubal was sculpted and enshrined within the newly erected Ka'ba. The statue was meant to replace the missing Black Stone.<sup>4</sup>

Some time later, so it's been told, Mohammed's grandfather, 'Abd al-Muttalib, had a dream in which he was shown the true location of the Ka'ba's old foundations and the sealed-off well. Whether the dream itself is apocryphal or not, it is accepted that al-Muttalib dug in a spot not far removed from where the Ka'ba had been rebuilt and there found the well with the missing Black Stone.<sup>5</sup> That this was the true well is ascertained by the additional fact that some votive offerings—golden figures of gazelles and precious arms—were also recovered from its depths.<sup>6</sup> This is the present Well of Zamzam (sometimes transliterated Zemzem) that is now located outside the shrine.

Once the Black Stone had been recovered, the statue of Hubal was no longer needed, and it is quite possible that it was then removed to the roof of the shrine as vouched for by some authorities. When Mohammed later destroyed the idols, he destroyed that one too.

What this means, of course, is that the present Ka'ba does *not* rest on its original foundations. Those foundations should be sought for around the Well of Zamzam.

## HEAVEN'S BOLIDE

Immanuel Velikovsky's claim that the Black Stone was believed to have fallen from the planet Venus,<sup>7</sup> which might have been fed by Lenormant's mistaken view,<sup>8</sup> cannot be substantiated. Even so, there seems to be no doubt that the Stone had "streaked out of the heavens one night in the forgotten past."<sup>9</sup> Like other sacred images which ancient man venerated, the holiest object of Islam seems to be nothing but a meteorite.<sup>10</sup>

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<sup>1</sup> See her, for example, T. F. Keane, *Six Months in Meccah* (London, 1881), p. 177; S. Hurgronje, *Mekka* (Haag, 1888), pp. 18 ff.

<sup>2</sup> Macoudi, *op. cit.*, p. 296.

<sup>3</sup> H. Lewy, *op. cit.*, p. 350.

<sup>4</sup> *Ibid.*

<sup>5</sup> B. D'Herbelot, *Bibliothèque Orientale, ou Dictionnaire Universel Contenant Tout ce qui Regarde la Connoissance des Peuples de l'Orient*—based on the Arabic dictionary of Hadji Khalfa—Vol. I (La Haye, 1777), p. 432 & Vol. II p. 176.

<sup>6</sup> J. Wellhausen, *op. cit.* (Berlin, 1937 edition), p. 103.

<sup>7</sup> I. Velikovsky, *Worlds in Collision* (N. Y., 1950), p. 291.

<sup>8</sup> See above.

<sup>9</sup> S. Welles, *et al.*, *loc. cit.*

<sup>10</sup> F. A. Lucas, *Meteorites, Meteors and Shooting Stars* (N. Y., 1931), p. 7; G. A. Wainwright, "The Coming of Iron," *Antiquity*, X (1936), p. 6; P. K. Hitti, *op. cit.*, p. 100; S. Welles, *et al.*, *loc. cit.*; J. Huxley, *et al.*, *op. cit.*, pp. 95-96; F. Lenormant, *loc. cit.*

There has been some speculation that the Stone had once been red, and that its present black color owes itself to age-old patina.<sup>1</sup> There are also those who claim that, when it fell from heaven, it was white, and that it later blackened due to man's evil transgressions.<sup>2</sup> Its original reddish hue has never been authenticated, while, needless to say, neither has its previous whitish purity. Black meteorites, on the other hand, are not uncommon.<sup>3</sup> What seems certain is that the Stone's sacredness resulted from the mythic significance of its very blackness since this associates it directly with the proto-Saturnian deity of our discussion. As Lewy rightly deduced:

"As...this Black Stone was revered in a sanctuary dedicated to the cult of the 'Black Planet' Saturn, we comprehend that a black meteorite, or a black stone resembling a meteorite, was thought to be a piece of the 'Black Planet,' which means a part of the body of a great god which, therefore, deserved the same veneration as the planet itself."<sup>4</sup>

### AL-ILAH

One of the pre-Islamic Arabian deities was Ilah, also known simply as Il, which name is equivalent to the Aramaic and Hebrew El.<sup>5</sup> Ilah's correspondence with the Hebrew Eloah, which name is simply a fuller version of the more popular El, is also evident. Although Ilah was once identified as the Moon god,<sup>6</sup> the notion has long since fallen into disfavor, especially since the Hebrew El, as we have seen, is more readily identifiable as a Saturnian deity.<sup>7</sup> Because, in later times, the Jews had become accustomed in presenting El simply as God, so did the Arabs come to refer to their god as *al-Ilah*, that is *the* God. It is, needless to say, this older Ilah that turned into the Allah of Mohammed's faith. It can therefore be seen that, apart from the Ka'ba and the Black Stone, the very god of Islam, or at least his name, traces back to the proto-Saturnian deity of archaic times.

It thus becomes quite evident that, when all relevancy is taken into consideration, the major elements associated with Islam trace back to a proto-Saturnian symbolism. This is not to imply that Muslims are willfully, or even knowingly, worshipping Saturn when they perform their devotions. Neither does it mean that Mohammed was attempting to dupe his followers in his founding of Islam. His belief in Allah as the one true god of humankind was, as it continues to be among his faithful, a sincere attempt to elevate godhead beyond and above materialism.

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<sup>1</sup> I. Velikovsky, *op. cit.*, p. 290.

<sup>2</sup> D. BouBakeur, "The Mecca, the Kaaba and the Origins of Islam," *New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man* (Bergamo, 2002), p. 280.

<sup>3</sup> See, for instance, D. Overbye, "Voyager Was on Target Again," *Discover* (April 1986), p. 78.

<sup>4</sup> H. Lewy, *op. cit.*, p. 348.

<sup>5</sup> S. E. Langdon, *Semitic Mythology*, Vol. V of *The Mythology of All Races* (N. Y., 1931/1964), p. 5.

<sup>6</sup> *Ibid.*

<sup>7</sup> See here the evidence presented in *God Star*, pp. 135, 141-142, 223-227, 229, 267-268, 283, 305, 433, 443, 448.



## EL GABAL

The Black Stone associated with the Meccan Ka'ba was not unique. Just as there had been other cubic temples in other parts of the Near East, so had there been other black stones that were considered just as sacred.

Such a black stone, which is also believed to have been a meteorite, roughly conical in shape, was worshipped by Syrian cultists as the image of the god Elagabalus at the shrine of Emesa.<sup>1</sup> This stone was later transported by the Roman emperor Marcus Aurelius Antoninus to his imperial city and deposited in the temple of Kybele.<sup>2</sup> It was then that the emperor assumed the name of the Syrian deity who had somehow won his loyalty, becoming known from then on as the Emperor Elagabalus.

This name, however, was the Latinized form of the god's Semitic one, which is often rendered simply as Gabal, and who is just as often represented as a sun god.<sup>3</sup> But that this sun was the proto-Saturnian one of our interest is indicated by the god's full name from which the Latinized version is derived. That full name is *El Gabal*<sup>4</sup>—also rendered as Elagabal and/or El Jebel—which translates as El of the Mountain. While the clarification of what this mountain was will have to wait for a future volume, El's identity as proto-Saturn need hardly be re-stressed.

## DUSHURA

Another deity associated with the subject of our discussion was the North Arabian god Dušura—pronounced Dushura—whom the Greeks rendered as Dousares, which name is also transliterated as Dusares. Because Strabo described the Nabataeans as sun worshippers,<sup>5</sup> Stephen Langdon identified Dušura, who was their deity, as a Sun god.<sup>6</sup> There have also been those who presented Dušura as the offspring of a greater Lord through a virgin mother, and that his birth was celebrated on the 25th of December.<sup>7</sup> But because this is a late duplication of the parentage and birth of Jesus, it cannot be used as evidence of the god's real identity. The Greeks' identification of Dousares with their own Dionysus,<sup>8</sup> as that of the Romans with the equivalent Bacchus,<sup>9</sup> leaves us in a better position to equate the god as another Arabic version of the proto-Saturnian deity.<sup>10</sup>

What associates this god with our present subject is that, according to the Greek lexicographer known as Suidas, the object of Dušura's worship was also a black stone that stood on a

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<sup>1</sup> S. E. Langdon, *op. cit.*, p. 54; E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 109.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> S. E. Langdon, *loc. cit.*

<sup>5</sup> Strabo, *Geography*, XVI:4:26.

<sup>6</sup> S. E. Langdon, *op. cit.*, pp. 16, 17.

<sup>7</sup> *Ibid.*, p. 16.

<sup>8</sup> *Ibid.*, pp. 16, 17.

<sup>9</sup> *Ibid.*, p. 17.

<sup>10</sup> *God Star*, pp. 312-314, 317, 443-446; *Flare Star*, pp. 92, 114, 127-128, 130, 230.

pedestal of gold.<sup>1</sup> And while the dimensions of this stone—some four feet high and two feet wide<sup>2</sup>—do not conform to a cube, the god's symbol was still known and referred to as *ka'bu*.<sup>3</sup>

There were other black stones and cubic symbolism attached to the worship of other deities, both male and female, in the ancient Near East, but these will have to be deferred to their proper chronological place in our continuing reconstruction of Earth's primordial history. What we must now concentrate on are two questions: Why was the cube associated with the Saturnian planet and its god? And why were both god and planet thought to have been black?

### AL-RUKABA

As a terrestrial replica of the deity's celestial residence, the Ka'ba is not exceptional. In fact, as David Talbott well recognized, *all* ancient temples, regardless of their shape, were originally meant to duplicate Saturn's celestial original.<sup>4</sup> But if we accept this original as having been astral in character, those Saturnian temples that were fashioned in cubic form become all the more puzzling.

Back in 1988, I could claim that research up to that point had uncovered absolutely nothing concerning proto-Saturn that might have appeared cubic.<sup>5</sup> In this respect, despite those who, at my behest, had tried to solve the problem, not much has changed since then. As I had formerly asked, could there consequently be some long forgotten



Basalt statue of Dushura/Dusares—  
the Arabic Dionysus.

<sup>1</sup> S. E. Langdon, *op. cit.*, p. 16.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> D. N. Talbott, *The Saturn Myth* (N. Y., 1980), pp. 145 ff.

<sup>5</sup> D. Cardona, "The Kaaba," *KRONOS* XII:3 (Spring 1988), p. 25.

meaning hidden within the *word* as opposed to the object? In other words, could the word *ka'ba* have derived from something other than *ka'b*, which word does mean “cube,” as it has been assumed?

Let us begin with the mundane assertion that, although Saturn is now a planet, it had formerly been a star. It was therefore quite surprising when Talbott found reason to assert that the Saturnian sun-god “does not ever seem to be portrayed as a star in early iconography.”<sup>1</sup> I say “surprising” because Talbott knew better. In fact, let’s be clear about this. In the earliest civilization known to us, that of Sumer, the very sign for “god” was simply that of a star.<sup>2</sup> Talbott not only knew this, he actually introduced his major work on the subject by stressing it.<sup>3</sup> Moreover, this Sumerian god was An,<sup>4</sup> also rendered Anu, whose *only* pictographic representation was an asterisk and/or star. And that An stood for Saturn was documented by Talbott from the very start of his exposition on the subject.<sup>5</sup>

Since a cubic shrine for god in heaven does not seem to make much sense—not even Muslim sense—is it not possible that the word *ka'ba* is merely a corruption of the very word for “star” which originally stood for the Saturnian god? The Babylonian word for “star” was *kakkabu*.<sup>6</sup> In Hebrew, the word for “star” is rendered as *kowkab*.<sup>7</sup> In Maltese it is *Kewkba*,<sup>8</sup> obviously derived from *kawkaba*. Is it not possible that the word *ka'ba* degenerated from *kawkaba*, and that later generations, having forgotten its original symbolism, found the cube, for which it was mistaken, a more wieldy three dimensional shape to replicate god’s divine edifice?

If, as some maintain, it was the meteoric Black Stone that was originally known as *ka'ba* or *ka'bu*,<sup>9</sup> corruption from an earlier concept can still apply since, in Babylonian, even meteors were referred to as *kakkabu*, in full *kakkabu rabu*.<sup>10</sup>

The above is not proffered on etymological grounds since, when it comes to similarity of sounds, the rules of etymology do not always apply. In this instance, the case of Cinderella’s slippers, which we mentioned in the first volume of this series,<sup>11</sup> comes immediately to mind. As most children know, Cinderella’s slippers were supposedly made of glass. What is not widely known is that they really were made of sable fur. This misconception owes itself to the similarity of sounds between the French word *vair*, which means “sable,” and *verre*, that is “glass.”<sup>12</sup> A similar misconception also noted in our first volume concerns a famous saying attributed to Jesus to the effect that “it is easier for a camel to go through the eye of a needle,

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<sup>1</sup> D. Talbott, “Saturn Myth—A Challenge to the Planetary Hypothesis,” *Kataklysmos* (May 19, 1987), p. 22.

<sup>2</sup> J. E. Pfeiffer, *The Emergence of Society: A Prehistory of the Establishment* (N. Y., 1977), p. 170.

<sup>3</sup> D. N. Talbott, *The Saturn Myth* (N. Y., 1980), p. 10.

<sup>4</sup> S. E. Langdon, *op. cit.*, p. 93.

<sup>5</sup> D. N. Talbott, *op. cit.*, pp. 17, 26, 32, 44, 52 ff., 88, 163.

<sup>6</sup> M. Jastrow, Jr., *Die Religion Babyloniens und Assyriens* II/2 (1912), pp. 153-154.

<sup>7</sup> J. Strong, *op. cit.*, p. 54.

<sup>8</sup> E. D. Busuttil, *Kalepin Tliet IIsna* (Valletta, 1978), p. 56.

<sup>9</sup> S. E. Langdon, *op. cit.*, p. 16.

<sup>10</sup> M. Jastrow, Jr., *op. cit.*, p. 696.

<sup>11</sup> *God Star*, p. 22.

<sup>12</sup> E. C. Brewer, *Dictionary of Phrase and Fable* (Philadelphia, 1898), p. 1211.

than for a rich man to enter into the kingdom of God.”<sup>1</sup> This, too, happens to be based on a misunderstood Greek phrase in which the word *kameylos*, which means “rope,” sounded like *kamelos*, the “camel” of the mistranslation.<sup>2</sup> After all, while Saturnian temples sprouted all over the world, we note that cubic ones were restricted to Semitic-speaking cultures in which *kawkaba* and *ka’ba* would have sounded much alike.

Additional to the above, we need not re-stress proto-Saturn’s primordial immobility in Earth’s north celestial pole, the very place that is presently occupied by the Pole Star. Although the meaning behind this reality had probably also been forgotten by the time Mohammed had reclaimed his god’s holy shrine, its memory was never quite obliterated. This is borne out by a Muslim text which enigmatically states that “the polestar proves the Ka’ba is the highest situated territory; for it lies over against the center of heaven.”<sup>3</sup> As it happens, the very name of the Pole Star in Arabic is al-Rucaba<sup>4</sup>—or al-Rukaba—the phonetic similarity of which to *ka’ba* need hardly be pointed out.

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<sup>1</sup> Mark 10:25; Luke 18:25.

<sup>2</sup> D. B. Vitaliano, *Legends of the Earth* (Bloomington, 1973), pp. 5-6.

<sup>3</sup> A. J. Wensinck, “The Ideas of the Western Semites Concerning the Navel of the Earth,” *Afdeeling Letterkunde* XVII:1 (1916), p. 15.

<sup>4</sup> J. O’Neil, *The Night of the Gods*, Vol. I (London, 1893), p. 226.



# Chapter 12

## Divine Colors

### BLUE-BLACK DEITIES

**T**he next question to answer is: Why was the Saturnian planet and its god considered to have been black? Did the proto-Saturnian sun really turn that color—did it lose all of its luster—once it got hidden behind the dust it had itself expelled?

That a star can expel dust as dark as soot was ascertained when such a star was seen to do exactly that.<sup>1</sup> It is, however, doubtful that the dust expelled by proto-Saturn would have been as black as soot. Had that been the case, with the vast amount of dust that proto-Saturn would have shed, the world's entire sky would have been blotted out. There would then have been no sign of proto-Saturn for it to have been described as black or any other shade. At present, when our Sun is hidden behind cloudy weather, even the most dense, it does not appear black. A total eclipse could have rendered proto-Saturn black, but there was no other body rightly placed for such an occultation to occur. Let us, then, dig deeper.

The *Narada Purana* contains another tract in which Saturn is painted black, but whoever was responsible for that information threw in an ambiguity. What we find reported there is that Saturn has a “complexion” which is either black or blue.<sup>2</sup> Nor is the *Narada Purana* alone in this. While we have seen that Kala, one of the Sanskrit names for Saturn, actually means “black,” it also means “dark blue.”<sup>3</sup> So, likewise, with Nilalohita. While serving as an epithet of Shiva,<sup>4</sup> whom we have already seen identified as Saturn, this name's meaning is “dark blue.”<sup>5</sup> And so, again, with Nilakantha, which means “Blue Throat,” yet one more name bestowed on Shiva.<sup>6</sup>

Another Indic deity that catches our attention in this respect is the controversial Krishna. This god's legendary exploits serve to cast him in a bold Herculean mold with traits in common with a Martian avatar. And yet there is no doubt concerning his original stature as just another Saturnian deity, so many of which culminated in overburdening Hinduism, as they did every other religion of the ancient world. We will have more to say regarding Krishna's Martian traits, and the manner through which he came by them, in their proper chronological slot in a future volume. What concerns us here is Krishna's original Saturnian character.

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<sup>1</sup> *New Scientist* (April 20, 1996), p. 12.

<sup>2</sup> *Narada Purana* II:55:97-100.

<sup>3</sup> V. S. Apte, *The Practical Sanskrit-English Dictionary* (Delhi, 1965), pp. 353, 785.

<sup>4</sup> *Ibid.*, p. 415.

<sup>5</sup> *Ibid.*, p. 569.

<sup>6</sup> J. Herbert, “Hindu Mythology,” in “India: The eternal Cycle,” *Larousse World Mythology* (London, 1972), p. 221; P. Masson-Oursel & L. Morin, “Indian Mythology,” *New Larousse Encyclopedia of Mythology* (London, 1972), p. 367; H. de Wilman-Grabowska, “Brahmanic Mythology,” *Asiatic Mythology* (N. Y., 1972), pp. 121, 136; C.-H. Marchal, “The Mythology of Indo-China and Java,” in *ibid.*, p. 220.

We commence with his very name. In conformity with one of the main characteristics of the planetary god in question, the name Krishna means “the dark one,”<sup>1</sup> and/or “the black.”<sup>2</sup> He is additionally believed to have been Vishnu reincarnated,<sup>3</sup> which casts him as Saturn in a different mold.<sup>4</sup> This link is also evident in the god’s stated identity as Time personified,<sup>5</sup> another major characteristic of the Saturnian deity.<sup>6</sup> In fact, Kala, meaning “black,” is not only one of the Sanskrit names of Saturn, it also stands for Time.<sup>7</sup> Thus, to the Hindus, the “Wheel of Time” is known as the Kala-cakra (also rendered Kala-chakra).<sup>8</sup> Truth be told, the original Saturnian identity of the god is not hidden in Hindu sources. As the eminent scholar Benoytosh Bhattacharyya pointed out in 1933, Saturn, or Shani, “receives a good share of attention” in the *Rig Veda*. In the later *Koshas* and *Stotras*, however, there are several other names supplied for the planet besides Shani, not the least important among which is Krishna.<sup>9</sup>

In keeping with our present line of interest, the god of whom Krishna was believed to have been the reincarnated form, that is Vishnu, is represented as being of a blue color.<sup>10</sup> It is therefore not surprising that Krishna himself is also often painted blue.<sup>11</sup> With his designation as “the black” and/or “the black one,”<sup>12</sup> this tends to turn Krishna into a blue-black god.

## TLALOC

Blue-hued deities are not restricted to Hinduism or the Eurasian continent. Half a world away, we meet the god Tlaloc among the Aztecs of the New World. Having been deified as “the very first”<sup>13</sup> among the deities of that blood-thirsty nation is enough to equate this god with proto-Saturn. This identity is strengthened through the god’s assimilation with Quetzalcoatl,<sup>14</sup> who was occasionally even *referred to* as Tlaloc.<sup>15</sup> As if to prove this duality, there exists a sculpture of Quetzalcoatl on the underside of which the head of Tlaloc is artistically engraved.<sup>16</sup> That Quetzalcoatl, usually identified as the personification of the planet Venus

<sup>1</sup> W. D. O’Flaherty, *Hindu Myths* (Harmondsworth, 1976), p. 346.

<sup>2</sup> G. de Santillana & H. von Dechend, *Hamlet’s Mill: An Essay on Myth and the Frame of Time* (Boston, 1969), p. 78.

<sup>3</sup> W. D. O’Flaherty, *loc. cit.*

<sup>4</sup> *God Star*, pp. 233, 236, 246, 310, 440, 449, 451; *Flare Star*, pp. 220, 228, 230-232, 239.

<sup>5</sup> R. L. Thompson, *Mysteries of the Sacred Universe* (Alachua, Florida, 2000), p. 194.

<sup>6</sup> *God Star*, pp. 170, 240, 262, 282, 307 ff.

<sup>7</sup> G. de Santillana & H. von Dechend, *op. cit.*, p. 135; see also *God Star*, pp. 309-310.

<sup>8</sup> W. E. Begley, *Visnu’s Flaming Wheel: The Iconography of the Sudarsana-Cakra* (N. Y., 1973), p. 96.

<sup>9</sup> A. K. Bhattacharyya, *Collected Works of Dr. Benoytosh Bhattacharyya* (Calcutta, 1997), pp. 25-26.

<sup>10</sup> A. S. Murray, *Manual of Mythology* (N. Y., 1950), p. 390; C. A. Burland, *Myths of Life & Death* (N. Y., 1974), p. 163.

<sup>11</sup> *Ibid.*, pp. 93, 104.

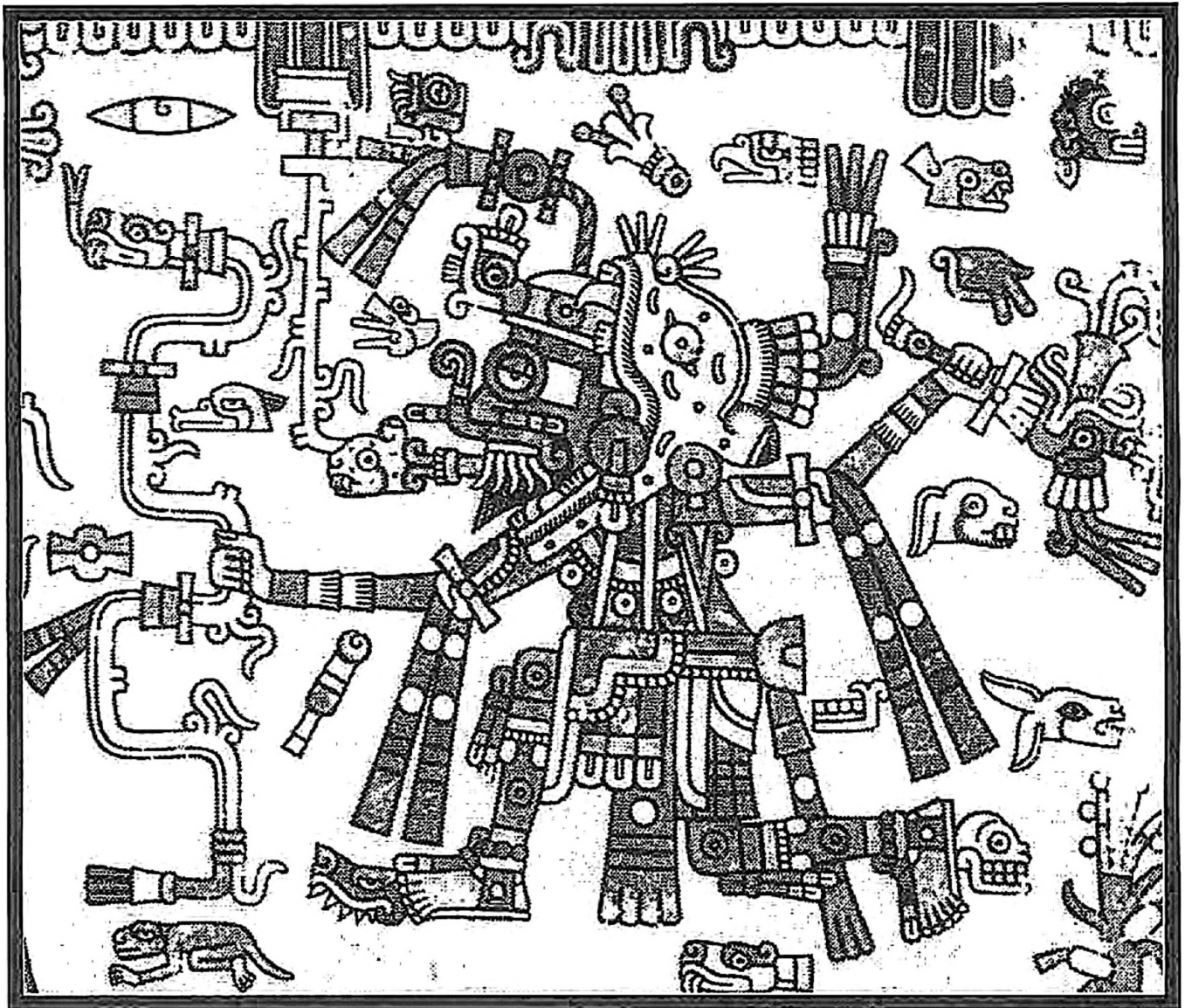
<sup>12</sup> *Ibid.*

<sup>13</sup> G. Brotherston, *Image of the New World* (London, 1979), p. 105.

<sup>14</sup> B. C. Brundage, *The Fifth Sun: Aztec Gods, Aztec World* (Austin, 1979), p. 108; M. Oldfield Howie, *The Encircled Serpent* (N. Y., 1955), pp. 303, 304.

<sup>15</sup> B. C. Brundage, *loc. cit.*

<sup>16</sup> *Ibid.*, pp. 112-113.



Tlaloc—as depicted on the Laud Screenfold.

by most mythologists, was actually the god of the planet Saturn has been amply demonstrated in one of our previous volumes.<sup>1</sup> One can also add the fact that the helpers of Tlaloc—of which more in a later volume—are often shown wearing a trapezoidal ornament which, among the Aztecs, symbolized the year,<sup>2</sup> and therefore time, that other trait so archetypal of the Saturnian deity.

What is of more importance, however, is that Tlaloc is said to have lived at the zenith,<sup>3</sup> which actually means the pole, and to have been “static,” that is unmoving, “at heaven’s heart.”<sup>4</sup> The specificity of the zenith, as well as heaven’s heart, as the pole is demonstrated by

<sup>1</sup> *God Star*, pp. 37-39, 59, 312, 314-317, 435-439.

<sup>2</sup> J. E. S. Thompson, *Maya Hieroglyphic Writing* (Norman, 1971), p. 145.

<sup>3</sup> G. Brotherston, *op. cit.*, p. 85.

<sup>4</sup> *Ibid.*, p. 187.

the locality's stated situation "in the farthest north,"<sup>1</sup> all of which is in agreement with the north celestial placement of the immobile Saturnian god.

Tlaloc's color was ambivalent. He was often associated with the color red and sometimes even so portrayed.<sup>2</sup> But he was also at times painted black.<sup>3</sup> This is not to be considered contradictory since proto-Saturn's color was seen to change through time. As we noted in a previous volume of this series,<sup>4</sup> and illustrated on the covers of our three prequels, the proto-Saturnian sun would originally have shone dimly red. As we, however, have also mentioned, for a time it even assumed a greenish hue.<sup>5</sup> Red and black were not in fact the only colors associated with Tlaloc. Still in keeping with our present trend, the black-bodied Tlaloc was also shown with a blue face,<sup>6</sup> as is apparent from a frieze at Teotihuacan.<sup>7</sup>

Because Tlaloc was also considered a god of rain, as are various other Saturnian deities, Edwin Krupp understood his blue face as signifying the azure sky, with his black body standing for the stormy clouds.<sup>8</sup> Had he compared this Aztec god with those blue-hued deities of Hindu lore we have discussed above, he might have had a change of mind.

### SATURNIAN BLUE

"Before the dawn of history," wrote Paul Desautels, former supervisor of the mineralogy department at the Smithsonian Institution, "men were finding and assigning special values to certain kinds of rock and mineral pebbles that were rare or particularly beautiful."<sup>9</sup>

"Thus was born the gemstone," he went on, "a mineral set apart from the rest by beauty, rareness, and durability. The combination of attributes is relatively uncommon. Perhaps only one hundred mineral species are considered gems. For the sake of these baubles, wars have been fought, kingdoms have changed hands, and assassinations have been committed."<sup>10</sup>

As he then adds:

"Gemstone lore, legend, and superstition have been part of every human society. In almost every culture gem materials have been given religious or spiritual significance."<sup>11</sup>

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<sup>1</sup> W. F. Warren, *Paradise Found* (Boston, 1885), pp. 246-247.

<sup>2</sup> D. Duran, *Book of the Gods and Rites and the Ancient Calendar* (Norman, 1971), p. 155.

<sup>3</sup> I. Nicholson, *Mexican and Central American Mythology* (London, 1967), p. 96; M. Fauconnet, "Mythology of the Two Americas," *New Larousse Encyclopedia of Mythology* (London, 1972), p. 437.

<sup>4</sup> *Flare Star*, p. 258

<sup>5</sup> *God Star*, p. 25.

<sup>6</sup> E. C. Krupp, *Beyond the Blue Horizon* (N. Y., 1991), p. 113.

<sup>7</sup> I. Nicholson, *op. cit.*, p. 80.

<sup>8</sup> E. C. Krupp, *loc. cit.*

<sup>9</sup> P. E. Desautels, *The Mineral Kingdom* (N. Y., 1968), p. 72.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*



The above has special meaning for us because, just as the color black in heraldry continued to be named for Saturn down into medieval times, so also did blue gems persist in being held sacred to the same planet and its god. One of these gems, perhaps the bluest of them all, is the sapphire. Fair enough, sapphires come in different shades, but those which are not blue are called by their respective color. When the word lacks such a designation, it invariably refers to the blue variety, especially the deep blue, which is the most valued among its widespread family.

The word “sapphire” is itself derived from the Greek *sappheiros* through the Latin *sapphirus*, both of which mean “blue.” That much is common knowledge. What might not be widely known is that the word’s etymological roots are also evident in the Hebrew word *sappir* as well as in Persian *safir*.<sup>1</sup> Now while both of these words stand for “sapphire,” the Persian *safir* actually translates as “beloved of Saturn.”<sup>2</sup> Nor is this unique. In Sanskrit, the word “sapphire” is rendered *shanipriya*, derived from *Shani*, which, as we have seen, is one of the names for Saturn in that language, and *priya*, which means “precious.” Thus *shanipriya*, Sanskrit for “sapphire,” means “precious to Saturn.”<sup>3</sup> In fact, if we are to believe professional jewelers, the word “sapphire” can be “roughly translated to mean ‘dear to the planet Saturn’ in many different languages.”<sup>4</sup>

Sapphires were not the only gems held sacred to Saturn. In China, so was jade, but not the usual green variety. On the contrary, the jade used in the imperial worship of Shang-te, the Saturnian Yellow Emperor, was of the rarer blue. As we earlier noted, this rite was held at Peking’s Altar of Heaven, during which the Emperor was required to kneel while facing north, Saturn’s old celestial throne. It was during this ceremony that the emperor had to acknowledge to be inferior to Heaven, even if to Heaven alone. And it was in that respect that one of the most precious of royal items, a cylinder of blue jade, was offered to the Supreme Ruler of Heaven, that is Shang-te himself.<sup>5</sup>

## PURPLE DAWN

Let us now return to the proto-Saturnian sun which these blue-hued deities, as well as gems, are here claimed to represent. As we have seen, one of the Sanskrit names for Saturn, that is Kala, can actually mean “dark blue.” Dark blue can be dark enough to appear almost black. But while some might think this is an adequate reason for Saturn’s classical black shade, we find there’s more to it than that. Let us take Shiva’s epithet, Nilalohita, as an example. While, as we have seen, this name can also mean “dark blue,” it additionally translates as “purple.”<sup>6</sup>

One objection that has been raised by some when it comes to sapphires is that, while the association of these gems with the planet Saturn is obviously genuine, it cannot reach far into

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<sup>1</sup> “Sapphire in History” at *angara.com*

<sup>2</sup> *Ibid.*

<sup>3</sup> D. Harper, *Online Etymology Dictionary* (2010), *etymonline.com*

<sup>4</sup> “History and Lore of Sapphire,” *jewelsforme.com*

<sup>5</sup> F. S. Dobbins, *Error’s Chains: How Forged and Broken* (N. Y., 1884), p. 464.

<sup>6</sup> V. S. Apte, *op. cit.*, p. 569.

antiquity because these gems were unknown to ancient nations. No reference to these stones, it has been said, can be found in literature prior to the Roman era. Before that time, or so it is believed by some, the actual jewel that is meant by most of these archaic words was lapis lazuli.<sup>1</sup> But even if so, lapis lazuli is also blue, while the Saturnian connotations behind the words *safir* and *shanipriya* will for ever continue to hold. On the other hand, there are those who believe that sapphires *were* known before the Roman period. And so do we.

Our conviction in this case is based on certain qualities exhibited by a majority of these gems which are not shared by lapis lazuli, qualities that have even greater meaning to our present subject. One of these qualities is the deep indigo that some of these stones exhibit, which color borders on purple. But, more than that, many sapphires share an even more peculiar feature which only manifests itself under artificial light such as would have been supplied in ancient times by flaming torches and flickering oil lamps. Under such illumination, quite a few of these gems tend to look “dark and inky” while, in some cases, their blue hue has a habit of turning into violet.<sup>2</sup>

It is the above traits, more than anything else about these stones, that would have captured the imagination of our ancient forebears in relation to Earth’s altered environment following proto-Saturn’s major flare-up. As the Hopi well remembered, this was “the time of the dark purple light, Qoyangnuptu, the first phase of the dawn of creation...”<sup>3</sup>

As we have mentioned in passing, Quetzalcoatl was reputed to have been the first light to appear at Creation,<sup>4</sup> which is generally understood as the first light to appear in the world.<sup>5</sup> His alter-ego, Tlahuizcalpantecuhtli, was thus not only known as the god of light, but also as the god of dawn.<sup>6</sup> That this is not a reference to subsequent daybreaks is shown by the affirmed belief that this god’s light was “created *before* the sun.”<sup>7</sup>

It thus seems probable that when the Roman poet Martianus Capella has Harmonia declaring that, in his ordering of the universe, Jupiter’s rays “renew the purple dawn for men,”<sup>8</sup> he was harking back to an age-old belief rather than the early morning light of his own time.

Because proto-Saturn had for ages stood immobile in Earth’s north celestial pole, that very locality also came to be associated with the purple light that was shed at the beginning of Creation. Thus, as is contained in one of their songs, the Hopi continued to believe that the “dark purple light” of Creation had risen in the north.<sup>9</sup>

To the Chinese, the north centre of the sky is still known among them as the Purple Pole.<sup>10</sup> So, also, do they refer to the circumpolar stars as the Purple Subtle Enclosure.<sup>11</sup> As if that is

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<sup>1</sup> D. Harper, *loc. cit.*

<sup>2</sup> “Sapphire,” *Encyclopaedia Britannica*, Vol. 19 (1959 edition), p. 985.

<sup>3</sup> F. Waters (with O. White Bear Fredericks), *Book of the Hopi* (N. Y., 1963), p. 6.

<sup>4</sup> E. Keber, *Codex Telleriano Remensis* (Austin, 1995), p. 175.

<sup>5</sup> *Ibid.*, p. 262.

<sup>6</sup> E. Florescano, *The Myth of Quetzalcoatl* (Baltimore, 1999), p. 53.

<sup>7</sup> *Ibid.* (emphasis added).

<sup>8</sup> A. B. Cook, *Zeus: A Study in Ancient Religion*, Vol. I (N. Y., 1964), p. 757

<sup>9</sup> F. Waters, *op. cit.*, p. 7.

<sup>10</sup> E. C. Krupp, *op. cit.*, p. 264.

<sup>11</sup> R. H. Allen, *Star-Names and their Meanings* (N. Y., 1899).

not enough, they actually claim that the North Star, which is still remembered as Shang-te's divine abode, is also purple.<sup>1</sup> Since the North Star is not that color, this could only be an echo of the original purple star that had once occupied that special pole. In other words, besides shedding a light of that particular shade, proto-Saturn would have itself assumed a purple hue.

### MESSIANIC HINTS

Few concepts survive long after their origin has been forgotten other than in religion. It is therefore not surprising when we come across similar echoes entrenched in the beliefs of other nations. In the Jewish work known as *Zohar*, for example, it is told that "a fearsome star blazing purple light," appearing "at the zenith," will precede the advent of the Messiah, which star will involve itself in a celestial battle that will take place "in the north."<sup>2</sup>

Although that Messianic event is supposed to take place in the future, there is no doubt that the star's placement in the zenithal north stems from the ancestral memory of proto-Saturn's previous polar station. This is more readily understandable since the very concept of the Messiah owes its origin to the belief that, having eventually retreated from Earth's vicinity, the Saturnian Yahweh/Elohim would one day return to repossess his realm. And, just as he had reigned supreme from his north polar station, so would he return from Zaphon,<sup>3</sup> the same as Tsaphon, which, as we have seen, is the Hebrew word for "north." When he does come, it is believed, even his throne will be colored purple.<sup>4</sup>

The Saturnian identity of the Messiah was also recognized by Giorgio de Santillana and Hertha von Dechend. "Few scholars only, among them Franz Kammers and Robert Eisler, have recognized the awe-inspiring age of such traditions," they wrote, "and even they have been incapable of calling the much-expected 'redeemer' and 'kosmokrator' by his very own name: Saturn."<sup>5</sup>

The above may shock those of the Judaic, and even Christian, faith—although no more than the identification of Yahweh/Elohim as Saturn—labeling it all as blasphemy. But the theme of the returning deity in days to come is not unique to these two religions. I shall not here discuss the universality of this belief since, again, that would be placing events out of chronological context. But, in keeping with the trend we have been following, I *will* include just one more Messianic datum.

This one comes from the Hopi Amerindians we have met before. It is the belief among the wise old priests of this tribe that, in a future that is not far off, the Blue Star Kachina will yet dance among their people. While this kachina will be impersonated by a tribesman, its dance will herald the approach of a true "blue star" that is still "far off and yet invisible," but "which will make its appearance soon." And, as in the case of the Messiah, the world we know will come to an end.<sup>6</sup>

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<sup>1</sup> <http://ignca.nic.in/ex025011.htm>

<sup>2</sup> R. Patai, *The Messiah Texts* (N. Y., 1979), pp. 86-87.

<sup>3</sup> W. A. Heidel, *The Day of Yahweh* (London, 1929), p. 463.

<sup>4</sup> L. Ginzberg, *The Legends of the Jews*, Vol. I (Philadelphia, 1968), p. 22.

<sup>5</sup> G. de Santillana & H. von Dechend, *op. cit.*, p. 418.

<sup>6</sup> F. Waters, *op. cit.*, p. 408.

We will be presenting more evidence of proto-Saturn's purple hue together with the violet light it shed upon the world as we trudge through the following pages. But first it would be best to elucidate what the colors we have been discussing really mean from an astrophysical point of view.

## STELLAR RADIATION

One problem that especially intrigued Roger Ashton in his early forays into the Saturn thesis concerned the nature of what he referred to as the primordial age of darkness. He was never comfortable with the dim, even if constant, illumination that proto-Saturn would have radiated were one to believe what the mytho-historical record intimated. As far as he was concerned, infrared and ultraviolet light would also have been required for the linkage of the terrestrial food chain. And since, according to him, proto-Saturn's otherwise feeble light would not have been strong enough to scatter pale blue, the sky would probably have appeared a deep purple or magenta.<sup>1</sup>

It is a pity that, in later years, Ashton lost faith in the planetary nature of the proto-Saturnian configuration, as he also did in Earth's primordial semi-darkness. Even so, when it came to Earth's immersion in ultraviolet light, the reason he supplied for his retraction was not reliant on his broader loss of faith. What influenced him in this respect was the Hopi symbolic allocation of dark purple to Earth's northern region, and the assignment of the color yellow to the east. As he explained, what passes for the polar assemblage in the mytho-historical record includes the allocation of colors to the points of the compass which has no scientific significance whatsoever. Thus, as he confessed, in the Hopi reference to "dark purple north and yellow east," he "mistakenly took the purple for the darkness."<sup>2</sup>

Now it is true that Earth's four cardinal directions were allotted different colors by various Amerindian tribes, especially the Navajo,<sup>3</sup> the Sioux,<sup>4</sup> the Zuni,<sup>5</sup> but also others.<sup>6</sup> So, also, among the Mexicans,<sup>7</sup> the Kalmucks of Siberia,<sup>8</sup> the Hindus,<sup>9</sup> and the Chinese.<sup>10</sup> Moreover, the assignment of these colors by one tribe or nation do not match those designated by another. None of this, however, has anything to do with the Hopi datum that led to it, where the color purple is *specifically* related to "the first dawn of Creation." Besides which, other than north and east, no other cardinal points or colors are mentioned by the Hopi in their *Song of Creation*. Like the Chinese and other ancient nations, what the Hopi did was associate the color purple with the north because that is where the primordial purple star had once resided,

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<sup>1</sup> R. Ashton, "The Age of Purple Darkness," *AEON* V:3 (December 1998), p. 98.

<sup>2</sup> *Idem*, "Purple Darkness," *AEON* V:4 (July 1999), p. 6.

<sup>3</sup> R. Van Over, *Sun Songs: Creation Myths from Around the World* (N. Y., 1980), pp. 42, 44, 47.

<sup>4</sup> M. W. Stirling, *Indians of the Americas* (Washington, D. C., 1965), p. 83.

<sup>5</sup> D. N. Talbott, *The Saturn Myth* (N. Y., 1980), p. 141.

<sup>6</sup> G. Mallery, *Picture-Writing of the American Indians*, Vol. 2 (N. Y., 1893/1972), pp. 623-625.

<sup>7</sup> D. N. Talbott, *loc. cit.*

<sup>8</sup> E. C. Krupp, *op. cit.*, p. 291.

<sup>9</sup> R. L. Thompson, *op. cit.*, pp. 36, 144.

<sup>10</sup> D. N. Talbott, *loc. cit.*



and the color yellow with the east because that is where the Sun that superseded proto-Saturn was eventually seen to rise.<sup>1</sup>

At the time Ashton proposed his theory, not enough was known about brown dwarfs. Since then, the situation has been more than compensated for. As it was eventually discovered, a vast amount of these dwarf stars happen to emit most of their radiation in the infrared.<sup>2</sup> But blue and violet light are not absent from these dwarf stars. On the contrary, as Wallace Thornhill indicated, the light emitted by the L-type dwarfs is curiously bluer than expected. Thus, proto-Saturn's "spectrum of light," according to him, "would have been much redder than at present." But also, "with a lower energy corona," blue light would have been added, as so would ultraviolet. And so, in fact, was it eventually discovered as far as brown dwarf stars themselves are concerned.<sup>3</sup>

But would the actual disk of the proto-Saturnian sun have *appeared* of a purple hue? To tell the truth, the name "brown dwarf," which was coined by Jill Tarter, is really a misnomer since these bodies are really anything but brown. According to Adam Burrows, not only do these stars "show a mix of red and blue," but their tints "progress from red to purple to magenta."<sup>4</sup>

Other than black, to which we shall soon come, blue and purple are the two dominant colors we have seen associated with the proto-Saturnian planet and its god. We especially note that purple and magenta, believed to be prominent in brown dwarfs, are the very two values of light that Ashton predicted to be required for a viable food chain under the postulated proto-Saturnian sun. As I have stated in a previous work, Ashton jumped the proto-Saturnian ship much too early. What is worse is that he has not stopped since then in scorning those who stayed on board.

In the meantime, discoveries from space continued to flood in and evidence to pile up. As often stated in our work, despite their difference, both in size and energetic yield, proto-Saturn's flare can be compared to supernovae. As is now known, these much more active flares unleash a torrent of high-energy radiation including ultraviolet light,<sup>5</sup> which, even at their greater distance, manage to increase the ultraviolet aggregate of Earth's atmospheric shell.<sup>6</sup> Imagine then what the radiation from the much nearer, even if less energetic, proto-Saturnian flare-up would have done to Earth and its atmosphere, to say nothing of its inhabitants.

As we have also previously noted, proto-Saturn's final flare resulted from the interaction of its plasmasphere with the Sun's heliospheric bubble and the different electrical potential it encountered once it had pierced through that enveloping sheath. According to Thornhill, "proto-Saturn would have switched from being a lightly stressed anode in the galactic discharge to

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<sup>1</sup> F. Waters, *op. cit.*, p. 7.

<sup>2</sup> G. Schilling, "Chill-Out Zone," *NewScientist.com* (June 8, 2001); R. Talcott, "First Forecast: Cloudy; No Rain," *Astronomy* (December 2002), p. 32.

<sup>3</sup> W. Thornhill, "Stars in an Electric Universe," *AEON V:5* (January 2000), pp. 47, 48.

<sup>4</sup> S. J. Goldman, "Brown Dwarfs Showing Their True Colors," *Sky Telescope* (February 2002), p. 22.

<sup>5</sup> A. Frank, "Cosmic Abodes of Life," *Discover* (May 2009), p. 49.

<sup>6</sup> G. R. Brakenridge, "Terrestrial Paleoenvironmental Effects of a Late Quaternary Age Supernova," *Icarus* 46 (1981), p. 85

a cathode in the Sun's discharge environment." Very much as in the more energetic case of supernovae, proto-Saturn's emission of ultraviolet light would have suddenly increased,<sup>1</sup> thus accounting for the purple dawn of Creation as contained in Hopi myth.

Saturn continues to emit infrared heat to this day,<sup>2</sup> and while, at present, it no longer sheds ultraviolet light, the planet is actually surrounded by an invisible torus which radiates extremely in that very wavelength.<sup>3</sup>

## ULTRAVIOLET LIGHT

We have said much, up to this point, concerning the colors associated with the Saturnian planet and its god, and we shall have reason to say more. But, for the time being, it is enough to keep in mind that, in ancient literature, as we have found out, Saturn is not only described as blue and/or black but also as blue-black.<sup>4</sup> This has caused much confusion among those who have tried their utmost to understand what the ancients were implying. Can we do better?

As we have pointed out in one of our prequels,<sup>5</sup> the names we give to colors do not mean the same to everyone. Studies by the World Color Survey have shown that the evolution of color names, or lexicons, have changed over time in a complex manner.<sup>6</sup>

"English and many other languages spoken in industrialized societies include 11-12 basic color terms. In contrast, there is a great diversity in color terminology across languages spoken in preindustrialized cultures, *with some languages using as few as two or three color terms*, and other languages using more."<sup>7</sup>

We could take ourselves on a long intricate journey through the ever branching maze of linguistic argumentation concerning this convoluted subject. Allow me instead to keep it short and simple by offering just two examples that are more in keeping with the subject at hand.

The very word "purple" which, according to the *Oxford English Dictionary*, did not enter the English language until A.D. 975, is ultimately derived from the Greek *porphyra*, which was used to describe the dye that was extracted from the shellfish which we now know as *Murex purpurea*. However, the word *porphyra* did not itself mean "purple" and, to be sure, the dye obtained from this mollusk has more of a *reddish* tint. So, likewise, in ancient Hebrew where "purple" is rendered 'argaman, derived from the Chaldean 'argevan which does not mean "purple" but translates as "scarlet."<sup>8</sup> It all makes one think that the ancients did not

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<sup>1</sup> W. Thornhill to D. Cardona, private e-mail (May 27, 2003).

<sup>2</sup> F. Hall, "Solar System Studies," *AEON* I:1 (January 1988), p. 104.

<sup>3</sup> S. Smith, "Vanishing Rings," *thunderbolts.info/tpod* (May 19, 2009), p. 2.

<sup>4</sup> A. Scherer, *Gestirnnamen bei den Indogermanischen Volkern* (Heidelberg, 1953), pp. 84 ff.

<sup>5</sup> *Primordial Star*, p. 32.

<sup>6</sup> D. T. Lindsey & A. M. Brown, "World Color Survey Color Naming Reveals Universal Motifs and Their Within-Language Diversity," *Proceedings of the National Academy of Sciences of the United States of America* (November 24, 2009), p. 19785.

<sup>7</sup> *Ibid.* (emphasis added).

<sup>8</sup> J. Strong, *Dictionary of the Hebrew Bible* (Madison, N.J., 1890), p. 16.

originally have a word for purple and that dark blue, black, or blue-black was the closest they could come in describing the light that was shed by proto-Saturn's flare-up. After all, dark blue and/or blue-black are not inapt descriptions for the color purple if a language has no word for that particular shade. This is not to say that the word "purple" is never used in ancient texts since, in the end, a word *had* to be invented to describe this divine color. And yet, do we not still refer to ultraviolet lamps and the glow they emit as black light?

We have said much in previous works concerning ultraviolet light, the way it affects life, together with the different hues it might be held responsible for.<sup>1</sup> But most of that was in relation to other planets or to an Earth in ages long before the advent of mankind. So the question now arises:

Apart from the electrostatic discharges, oceanic incursions, ballistic impacts, incinerations, volcanic and tectonic tribulations, that beleaguered Earth and its inhabitants—how did our ancient forebears fare within the new milieu that was established in response to Earth's irradiation of proto-Saturn's ultraviolet light?

We have already discussed the wide-ranging epidemics that exterminated a substantial portion of Earth's tribal populations through the cosmic rays dispelled by proto-Saturn's flare-up. We can now say those rays included ultraviolet radiation. But that such radiation is not necessarily harmful under all conditions we have also previously discussed.<sup>2</sup> Judging by clues left from the distant past, it is now known that there have been variations in ultraviolet radiation throughout Earth's history, not all of which was harmful to primordial life.<sup>3</sup>

It is not only primordial life that, in certain cases, managed to survive what would normally be considered lethal doses of ultraviolet radiation. This was proven through an experiment that was conducted on NASA's Long Duration Exposure Facility, a space satellite that was deployed in 1984. Some of the spores of the bacterial species known as *Bacillus subtilis* that were placed on the satellite were protected from solar ultraviolet light beneath a thin aluminum cover, while others were not. When, six years later, the satellite was retrieved, it was discovered that not all the spores that had been protected by the aluminum cover managed to survive, while not all those who were not so protected succumbed to ultraviolet light.<sup>4</sup> It was thus determined that even within items as small as dust particles, ultraviolet radiation would not necessarily harm entire microbial colonies.<sup>5</sup>

Microbes, however, are not the only form of life that can survive ultraviolet radiation. Not only that, but, as the Chinese Academy of Agricultural Sciences demonstrated, ultraviolet radiation can be beneficial. This was proven through an experiment in which several one-day-old broiler chickens were randomly separated into two individual groups and placed in separate but identical coops. Both of the enclosures were illuminated by ordinary light, with ultraviolet radiation added to only one of them. Those chickens in the ultraviolet-radiated pen not

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<sup>1</sup> *Flare Star*, pp. 429, 473-474; *Primordial Star*, pp. 17-27, 31, 51, 55, 226-227, 233, 327, 332.

<sup>2</sup> *God Star*, p. 293; *Primordial Star*, pp. 18, 25-26.

<sup>3</sup> K. Ravilious, "White-Knuckled Planet," *New Scientist* (July 16-22, 2005), p. 37.

<sup>4</sup> D. Warmflash & B. Weiss, "Did Life Come from Another World," *Scientific American* (November 2005), p. 69.

<sup>5</sup> *Ibid.*

only thrived, but their growth speed increased, their muscles improved, as so did the quality of their skeletal frame, the uniformity of their body, as well as their overall performance.<sup>1</sup>

There have been several other experiments showing both the harm and benefit of living beneath random doses of ultraviolet radiation. In the end, however, none of these studies can really tell us how it was that those who survived the catastrophes unleashed 10,000 years ago by proto-Saturn's flare-up managed to cope beneath the ultraviolet radiation that continued to stream down on Earth for an undetermined, but long, period of time. As we shall be indicating in a future volume, long after the dust settled and the sky regained its clarity, the purple star continued shining in the north.

## COLOR PERCEPTION

Human vision relies on what is known as trichromacy, the method which allows the mixing of just three fixed wavelengths of light at certain intensities into the multitudes of shades that color the world we see. This is because the human retina, which transmits visual information to the brain, has only three light-absorbing pigments. This is one of the primate kingdom's benefits since most other animal species are hamstrung with dichromacy, which limits their vision to the mix of just two colors. There are exceptions. A few nocturnal animals have only one color-absorbing pigment, while some fish, birds, and even reptiles actually have four, which gives them the ability to detect ultraviolet light. Not so with humans.<sup>2</sup>

True enough, some studies have suggested that two-to-three percent of women are born possessing four independent color-informative channels or cone cells in their eyes, which enable them to see a much greater variety of color combinations. Whether they can actually detect the full impact of ultraviolet radiation has not yet been determined, as neither has it been ascertained beyond all doubt that they *do* possess such a range of color reception. In other words, as of this writing, the studies in question remain somewhat inconclusive.

On the other hand, as Ashton pointed out, people who have had their lens removed *were* able to see ultraviolet, some of whom described the shade as blue or even downright violet.<sup>3</sup> Moreover, youngsters can sometimes detect ultraviolet, but only toward extreme short waves, without having their lens removed, even though requiring special glasses in order to focus the faint images.<sup>4</sup>

All of the above, however, make for rare and special cases which do not normally apply to the general population. How, then, were our ancient ancestors able to detect proto-Saturn's ultraviolet hue?

When synthetically-produced ultraviolet light is shone on certain objects, most of us can readily see their change of color and the fluorescent glow they emanate. It is for this reason that black lights, the ultraviolet lamps we mentioned above, are utilized for various scientific and other practical purposes. They are especially useful in medicinal and forensic diagnoses

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<sup>1</sup> L. Zhang, *et al.*, "Effects of Ultraviolet Radiation on Skeleton Development of Broiler Chickens," translated from *Scientia Agricultura Sinica* (April 2006), pp. 313-317.

<sup>2</sup> G. H. Jacobs & J. Nathans, "The Evolution of Primate Color Vision," *Scientific American* (April 2009), p. 56.

<sup>3</sup> R. Ashton, "The Age of Purple Darkness," *AEON* V:3 (December 1998), p. 100, citing R. H. Smythe, *Vision in the Animal World* (N. Y., 1975), p. 5.

<sup>4</sup> R. M., Besancon (Ed.), *The Encyclopedia of Physics* (1966), p. 743.



precisely because they allow the scrutiny of important details which are otherwise invisible. They are also used for exhibiting the luminous colors of certain minerals in museum presentations, for idiosyncratic art displays, and special effects during festivities such as Halloween.

Except for the special conditions noted above, however, our present Sun's display of ultraviolet light does not make itself visible to human eyes. Its radiating orb does not exhibit a purplish hue. This is due to the fact that the light it radiates entails the entire range of the color spectrum. Black lamps, on the other hand, are deliberately made to radiate very little light besides ultraviolet. A similar lack of ordinary light is what enabled the detection of proto-Saturn's ultraviolet luminosity and its purple orb by ancient man. The violent blast of ultraviolet radiation it emitted through its sudden flare-up would have drastically reduced proto-Saturn's infrared emission while allowing its enhanced purple brightness to shine through.

Even so, it is doubtful that man was able to perceive all of nature in the iridescent coloration the likes of which is displayed by artificial ultraviolet lights. But, judging by what remains extant of the memories he passed on to his descendants, the purple hue of the proto-Saturnian orb as well as Earth's atmospheric shell in the period following the flare-up was undoubtedly perceived for long after the event.

## ECHOES OF A DISTANT PAST

The celestial antics of what man began to think of as his god gripped him in a vice the hold of which continues to constrict him to the present day. In ways that often verged on the bizarre, man sought to re-enact what he, or his ancestors, had lived through. And although he remembered quite correctly, certain quandaries more than once resulted in deficient preservation. But even while, in time, such issues were corrected, certain others were by then much too ingrained to overcome long-held mistaken concepts. This was especially true when such erroneous notions were embraced by man's evolving cults, in which whatever happened to be misconstrued often turned into religious dogma.

One such problem involved the creation of new words in order to express novel experiences. As already noted, one of these innovative concepts had to do with color. The description of proto-Saturn's realm before a word for "purple" had been coined in certain languages resulted in blue-black or simply black as having been the concerned color. This is the reason we continue to run headlong into the designation of the planetary god in question as the black Saturn. Needless to say, it also accounts for the association of such items as black curtains and black stones with the Saturnian deity, some of which persist right to this day in the Meccan Ka'aba.

One of the means to keep these memories alive led certain tribes to paint their bodies blue. Among them were the Berbers and the ancient Britons.<sup>1</sup> Among the latter were the least known members of the Celtic tribes who infiltrated into Britain from mainland Europe. The Romans, with whom they clashed, called them Picti, which means "the painted ones," because of their blue-dyed skins. The English word "picture" and its various derivations is derived from the same Latin root. The dye with which the Picts painted themselves was produced from the plant *Isatis tinctoria*, popularly known as woad, which was once extensively culti-

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<sup>1</sup> R. Graves, *The White Goddess* (N. Y., 1966), p. 241.

vated in various parts of Great Britain. As Julius Ceasar himself noted: “All the Britons dye their bodies with woad, which produces a blue color and gives them a wild appearance in battle.”<sup>1</sup> The famous Celtic queen Boudicca, so beloved of the British, also known as Boadicea, was also said to have smeared herself with woad in her ravaging engagements against the Roman armies.<sup>2</sup> The Scots, with whom they eventually united, still refer to the ancient Picts as Blueskins.<sup>3</sup> Whether they actually painted themselves blue or not, tribes akin to that of Genghis Khan referred to themselves as the Blue Mongols.<sup>4</sup> As with other matters, it is now difficult to ascertain whether this custom came about because the human epidermis had looked blue while proto-Saturn’s ultraviolet light shone on the world, or whether it was because men wished to emulate proto-Saturn’s changed appearance.

There will be those who will claim that body painting antedates proto-Saturn’s postulated flare-up by several thousand years. The evidence for this rests on the discovery of red ochre in various ancient sites, such as the 92,000-year-old Qafzeh Cave in Israel.<sup>5</sup> Red ochre, which is a mixture of clay and iron oxide in the form of hematite, is believed to have been used by ancient man to dye the bodies of his dead kin in order to lend them a life-like appearance. These finds, however, have been dismissed by critics because of the uncertain dates attached to them as well as their intended use. After all, as has been pointed out, ochre supported various other utilizations.<sup>6</sup> It was definitely used to paint animals on the walls of European caves,<sup>7</sup> to polish bone implements in South Africa,<sup>8</sup> while blocks of the material from that same site have been turned into works of art by being aesthetically decorated with incised designs.<sup>9</sup> But even if body painting with red ochre was in vogue that long ago, it has nothing to do with the blue dyes that came in use later in time. Even when it came to daubing the bodies of the dead, the much later Chinchorro of the Chilean Andes painted the mummified remains of their departed children with “shimmering blue-black paint,”<sup>10</sup>

Others will be fast in pointing out that not all Picts are known to have covered their bodies, or parts thereof, with woad, but only tattooed themselves with the blue dye.<sup>11</sup> The Berbers definitely tattooed themselves, and they continued to do so down into modern times. As we shall be showing in a forthcoming sequel, the tattooing of bodies in blue or black designs also originated in imitation of what our ancestors saw their proto-Saturnian deity undergo.

Long after the events in question, the Egyptian alchemists of Alexandria managed to produce a violet type of gold, which to us would be inferior, but which they deemed the very best. It was not merely looked upon as an extremely precious metal, but as a spiritually

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<sup>1</sup> P. James & N. Thorpe, *Ancient Inventions* (N. Y., 2006), p. 260.

<sup>2</sup> “Ancient Blues,” *Discover* (March 1999), p. 26.

<sup>3</sup> D. L. Cyr, *King Arthur’s Crystal Cave* (Santa Barbara, California, 1997), p. 144.

<sup>4</sup> E. C. Krupp, *Skywatchers, Shamans & Kings* (N. Y., 1997), p. 185.

<sup>5</sup> K. Wong, “The Morning of the Modern Mind,” *Scientific American* (September 2006 Special Edition), p. 79.

<sup>6</sup> *Ibid.*, p. 80.

<sup>7</sup> *Ibid.*, p. 83.

<sup>8</sup> *Ibid.*, p. 82.

<sup>9</sup> *Ibid.*, pp. 80, 81.

<sup>10</sup> H. Pringle, *The Mummy Congress* (Toronto, 2001), p. 308.

<sup>11</sup> P. James & N. Thorpe, *loc. cit.*



**Skin-clad ancient Britons who painted their bodies blue in a Roman army campsite.**  
(Illustration by Fortunino Matania.)

imbued substance.<sup>1</sup> These alchemists hailed from the temple of Amon, the “hidden” Saturnian god, where alchemy was said to have been born. Whether the “spirit” that was thought to permeate this violet gold was held to be Amon’s remains an open question.

An odd religious rite that was practiced by the Maya leaves no doubt concerning its association with a Saturnian deity, the previously mentioned god Itzamna. According to them it was this god who presented them with the gift of writing.<sup>2</sup> Thus, every year, in the month they called Uo, they commemorated a festival during which the priests would bring out their folded codices and spread them out on freshly-cut boughs “in the house of the local lord.” Sacred incense would then be burned to Itzamna and the wooden boards between which the

<sup>1</sup> D. Teresi, *Lost Discoveries* (N. Y., 2002), p. 289.

<sup>2</sup> M. D. Coe, *Breaking the Maya Code* (N. Y., 1992), p. 12.



Itzamna

codices were folded would be anointed with a concoction made from “virgin water” and an indigo pigment which is now known as Maya blue.<sup>1</sup>

Not everything blue or purple had a favorable connotation in world religions. In Japanese Buddhist wedding ceremonies, for example, neither bride nor bridegroom was allowed to wear garments containing any trace of purple for it was said that the marriage of those who do would speedily come to an end. This superstition was supposedly based on the belief that purple dyes have a tendency to fade.<sup>2</sup> Since Japanese dyes are well known for their durability, it is more likely that the custom originated due to the fact that proto-Saturn’s ultraviolet period did not last. As the Hopi well remembered, the purple glow eventually relinquished its hold on Earth when, during “the third phase of the dawn of Creation,” the light returned to red.<sup>3</sup> It did not, however, transpire all that fast.

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<sup>1</sup> *Ibid.*

<sup>2</sup> F. S. Dobbins, *op. cit.*, p. 710.

<sup>3</sup> F. Waters, *op. cit.*, p. 6.



# Chapter 13

## Heavenly Transitions

### SELF PROPAGATION

As intelligent as our ancient forebears were within their own environment, there was nothing that could have told them what was happening to their sun, why it had flared up, and why its appearance totally changed once the sky dispelled its curtain of cosmic dust. In the end, they could only make sense out of what had transpired by endowing the radiating globe above them with a life of its own. When, in later years, they attempted to pass on the memory of what they had witnessed to their descendants, they could only do so by presenting the events as this lofty creature's calculated actions.

To the ancestors of the Zuni, a major tribe of the Pueblo Amerinds, this lofty being became known as Awonawilona who, "in the beginning," was the only being that existed in the darkness,<sup>1</sup> "before the sky was blue," when no other light shone in the sky.<sup>2</sup> Known as "the one who contains everything,"<sup>3</sup> or "the one who *is* everything,"<sup>4</sup> Awonawilona is said to have "assumed form" when he "fashioned a great light."<sup>5</sup> This great light became "*a* sun,"<sup>6</sup> which has unfortunately been understood by some as having been *the* Sun.<sup>7</sup> Quite naturally, ancient man's later comparison of Earth's primordial brown dwarf star with the present solar orb is understandable, but the difference was also often stressed. This is shown quite clearly by the composers of the Mayan *Popul Vuh* when they recorded the "old tales" their ancestors had related:

"Like a man was the sun when it showed itself. It showed itself when it was born and remained fixed in the sky like a mirror. Certainly, it was not the same sun which we see, it is said in their old tales."<sup>8</sup>

Although we have already been through this, the point we wish to stress this time around is the assuming of "form" by Awonawilona, since this seems to tell us that he either had no form or shape before the emission of the light or that he went through a change of shape following that event. Form or shape, however, was not all that changed. The proto-Saturnian sun

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<sup>1</sup> R. Van Over, *Sun Songs: Creation Myths From Around the World* (N. Y., 1980), p. 23.

<sup>2</sup> H. Hirschall, *The Song of Creation* (West Vancouver, 1979), myth #1.

<sup>3</sup> J. S. Morgan, *When the Morning Stars Sang Together* (Agincourt, Canada, 1974), p. 3.

<sup>4</sup> H. Hirschall, *loc. cit.* (emphasis added).

<sup>5</sup> J. S. Morgan, *loc. cit.*

<sup>6</sup> H. Hirschall, *loc. cit.* (emphasis added).

<sup>7</sup> J. S. Morgan, *loc. cit.*

<sup>8</sup> D. Goetz & S. Morley, *Popul Vuh* (Norman, 1972), p. 188 (emphasis added).

would also have gone through a transformation in its brightness *even after the full glare of its flare-up had ebbed*. In other words, once the brilliance of its flare-up had diminished, despite it's taking on a purple hue, the proto-Saturnian sun would have *continued* to shine much brighter than it had before it had entered the present Sun's domain of influence. It was, in fact, from that point onward that the luminary gained its renown as the blinding sun of mythic lore.

Changes in luminous outbursts are transitions which brown dwarfs are known to undergo, brightening as they cool with age. This is thought to be because their atmospheric gases condense into liquid droplets which form clouds. Storms are then said to whisk these clouds away, revealing the brighter, as well as hotter, atmospheric strata underneath.<sup>1</sup> The actual cause of these stellar storms is still debatable. As, however, already noted, we concur with those who continue to maintain that they result from sudden electrical discharges which, while possibly intrinsic, can also be incurred through the infiltration into a plasmatic cell of different electrical potential. In other words, these storms are nothing but the flare-ups we have been discussing.

One thing we can be certain of is that proto-Saturn's flare-up would not only have swept part of Earth's previously denser atmospheric envelope into space, it would also have blown away a goodly portion of its own clouds, which is where most of the cosmic dust we have already discussed would have come from.

In the end, as we shall see, proto-Saturn's appearance following the ebbing of its flare-up was so much changed that our ancestors began to think of it as the self-created creature of its former personality. As later told by the Egyptians, Ptah-Tenen,<sup>2</sup> whom we have already met, was the "maker" of his very own body.<sup>3</sup> The manner in which he was acclaimed, as reproduced below, makes this quite clear.

"Thou hadst no father to beget thee in thy person, and thou hadst no mother to give birth unto thee; *thou didst fashion thyself without the help of any other being*. Fully equipped thou didst come forth, fully equipped."<sup>4</sup>

## DIVINE PARENTAGE

The manner in which the proto-Saturnian deity was believed to have fashioned himself would have been debated to no end by those who had witnessed the transformation. Even today, if the Sun were to suddenly change its appearance, astrophysicists would be sent in droves back to their drawing boards in an attempt to understand what had transpired contrary to their expectations. Within the limits of their own intelligence, the ancients were no different. They would have striven to find a reason behind the changes that their luminary had experienced.

As we have noted in a previous volume, there had been those who viewed the retraction of proto-Saturn's polar column as an act of self penetration, whereby the god had sexual union

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<sup>1</sup> R. Talcott, "First Forecast: Cloudy; No Rain," *Astronomy* (December 2002), p. 32.

<sup>2</sup> Variant: Ptah-Tanen.

<sup>3</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. 1 (N. Y., 1904/1969), p. 510.

<sup>4</sup> *Ibid.* (emphasis added).

with himself.<sup>1</sup> It is therefore not surprising that this newly engendered deity was believed by some to have actually given birth to himself. God was thus seen as being his own father and, by the same reckoning, his own son.

This idea was bound to have caused mystification, which is why, even among the ancients, a certain amount of rationalization is sometimes met. Thus, in some cases, the proto-Saturnian deity was simply said to have fathered a son of the same name. This is the way we find it recorded by the Greek grammarian, Alexander Cornelius Polyhistor, in relation to the Babylonian god known as Belus. As he had it stated, “of him was born a son” who was also named Belus.<sup>2</sup> That Belus was the same as Kronos, the Greek Saturn, we also learn from him.<sup>3</sup> But because there were still those who realized that the son was the same as the father, the belief that the soul, or spirit, of the father passed on to his son, who thus became the image of his progenitor, especially among the Egyptians, became engrained as a religious creed.<sup>4</sup> In fact, as Arthur Cook, with whom we do not always concur, was bound to realize in his extensive wandering through the world’s mytho-historical records, the belief that “a son may be the re-birth of his own father” became widespread in antiquity.<sup>5</sup>

William Albright, on the other hand, misunderstood this situation. What he ended up believing after having surveyed some of the same data is that there simply were different forms of a common mythological idea in which a father was replaced by a son who happened to bear comparable attributes.<sup>6</sup> In his opinion, this came about due to the merging of cults devoted to different gods whose characteristics were similar but not identical. The resultant incongruity was therefore solved by claiming that one of the deities was the son of the other.<sup>7</sup>

Confusion, however, became rampant even among the very ancients who could not quite be certain exactly what their ancestors meant in passing on these hoary memories. This was the more telling since not all tales told exactly the same thing, which is not to be wondered at. After all, as is well known, even today, those who witness the same event rarely agree in the telling of what they saw. And when the event itself is not readily understood, the analogies that are used in an attempt to clarify the issue often work in reverse by causing more confusion. Different witnesses tend to paint the same event in different colors. This would account for the ambiguities we meet in some of the earliest recorded versions of the proto-Saturnian deity’s relations to his own altered appearance. The Babylonian Bel, the same as Belus, who was Saturn, according to Damascius, came into existence before Ea, who was also Saturn. Even though, in the end, it makes no difference, there were others who believed that it was Ea/Saturn who actually fathered the Saturnian Bel.<sup>8</sup>

Those who have delved deeply into comparative mythology could not have missed the

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<sup>1</sup> *Flare Star*, pp. 279 ff.

<sup>2</sup> Eusebius Pamphili, *Evangelicae Praeparationis*, XVII:419d.

<sup>3</sup> *Ibid.*; See also, *Flare Star*, p. 472.

<sup>4</sup> D. A. Mackenzie, *Egyptian Myth and Legend* (N. Y., 1907/1978), p. 3 of unpaginated “Preface.”

<sup>5</sup> A. B. Cook, *Zeus: A Study in Ancient Religion*, Vol. II, Part I (N. Y., 1965), p. 294.

<sup>6</sup> W. F. Albright, *Yahweh and the Gods of Canaan* (N. Y., 1968), p. 148.

<sup>7</sup> *Ibid.*

<sup>8</sup> D. A. Mackenzie, *Myths of Babylonia and Assyria* (London, 1915), republished as *Mythology of the Babylonian People* (London, 1996), p. 139.

situation we have been attempting to describe. Back in the nineteenth century, George Rawlinson was already stressing that, when it comes to godly parentage, the alleged relationships are not only often confused, but even contradictory.<sup>1</sup> A case in point he indicated was that of Nin, or Ninip, former transliterations of Ninurta/Saturn, who is sometimes presented as the son, while at other times the father, of the same Bel.<sup>2</sup>

### PROGENY'S OWN PROGENITOR

The concept of proto-Saturn's self creation among ancient peoples was best maintained by the Egyptians. As we have already seen, Ptah-Tenen was believed to be such a self-created deity. He was not, however, the only one. In an Egyptian *Coffin Text*, Atum is also made to claim he was his own creator.<sup>3</sup> "I came into being of myself," he is there made to say.<sup>4</sup>

In his form of Khepera,<sup>5</sup> Ra, too, was declared to have produced himself.<sup>6</sup> But in a different vein, although in the same place, he is additionally made to assert that he produced himself from "primeval matter."<sup>7</sup> This is the very "divine matter," or *paut*, we have earlier seen him produce from his very self. This "primeval matter" is even called Osiris, "the primeval matter of primeval matter," in other words the primeval matter *par excellence*.<sup>8</sup> All of which explains why Osiris was referred to as "the Great One" who was, at the same time, the son of the very same "Great One."<sup>9</sup> Needless to say, this made him his own father as well as his own son.

From all of the above, *but also in relation to what transpired later*, the Egyptians derived the belief that when a dead man's soul was taken up to heaven, he turned into that very deity, but also into his son.<sup>10</sup> This was the very fate claimed for Pepi I as found engraved on one of the walls inside his pyramid. As there recorded, the pharaoh became *neter sa neter*, that is "God, the son of God."<sup>11</sup>

Belief in the self creation of the primal deity continued to spread down through the ages and we find it embedded in the creeds of various ancient nations. The self generation of Prajapati, whom we have elsewhere seen identified as the proto-Saturnian god,<sup>12</sup> continues to be lauded by modern Hindus. Prajapati is the deity who is said to have fathered his own self.<sup>13</sup>

So, similarly, among the ancient Greeks, both in reference to their own gods as well as the foreign deities they believed in. That Kronos, their own Saturn, was the son of Ouranos, is

<sup>1</sup> G. Rawlinson, *The Seven Great Monarchies of the Ancient Eastern World*, Vol. I (N. Y., 1885), p. 73.

<sup>2</sup> *Ibid.*

<sup>3</sup> R. T. Rundle Clark, *Myth and Symbol in Ancient Egypt* (N. Y., 1959), p. 74.

<sup>4</sup> *Ibid.*, p. 40.

<sup>5</sup> E. A. W. Budge, *An Egyptian Hieroglyphic Dictionary*, Vol. I (N. Y., 1920/1978), p. 543.

<sup>6</sup> *Idem*, *The Gods of the Egyptians*, Vol. I (N. Y., 1904/1969), p. 314.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> *Idem*, *Osiris and the Egyptian Resurrection* (N. Y., 1911/1973), p. 169

<sup>10</sup> *Idem*, *The Egyptian Book of the Dead* (N. Y., 1895/1967), pp. lxxi-lxxii.

<sup>11</sup> *Ibid.*, p. lxxxiv.

<sup>12</sup> *God Star*, pp. 61, 196, 233, 310, 311, 446.

<sup>13</sup> B. C. Sproul, *Primal Myths: Creation Myths Around the World* (San Francisco, 1979), p. 181.



well attested. But that Ouranos was also Saturn, which makes Kronos his own son, is not all that widely known.<sup>1</sup> Even less remembered is that Kronos was believed to have a son also named Kronos.<sup>2</sup> When it comes to foreign deities, the Greeks considered the Egyptian god Osiris to have also been the son of Kronos,<sup>3</sup> which accords with the sacred formula, the divine cliché, that Saturn was the son of Saturn, the god who birthed his own self.

## THE BLOATED DEITY

The shift from red to purple was not the only change that proto-Saturn underwent at the shedding of the light. A change in mass would also have taken place. And this would have involved a change in size.

Together with the shedding of the light itself, such transformations in a cosmic body can be induced through modification of that body's electrical environment. Under such conditions, as Wallace Thornhill tells us, stars transform quite rapidly. And these changes would include the stars' apparent dimensions.<sup>4</sup>

As Earl Milton had even earlier recorded, if the Sun had to drift into a region of different electrical potential, it would physically change its size. Whether it would grow bigger or smaller would depend on the electrical strength or weakness of the region it would move into. Were it to move into a region powered by higher electrical energy, it would physically shrink. But here is where it gets more complicated since, at the same time, the electrical activity at its surface would actually intensify. The Sun, so Milton tells us, would compensate for this by increasing its atmospheric envelope. Depending on available energies, the Sun might even swell into a super giant star.<sup>5</sup> In other words, it would visually appear much larger.

The same thing would have happened to the proto-Saturnian brown dwarf star. Its electrical polarization would have been much lower than the Sun's. It, too, would have lost some of its mass. It, too, would have grown physically smaller. But it, too, would have had to compensate for its newly increased electrical activity at its surface through an expansion of its atmospheric gases. And it, too, would have appeared larger.

While the above makes it clear, as others have insisted, that mass is electromagnetic in character,<sup>6</sup> and that change in mass would involve electrical activity, proto-Saturn would also have lost mass through its shedding of material when it flared up. This would have resulted in a lesser density, which would mean that its spherical size would have actually increased, all of which would have added to the body's apparent expansion.

Taken all together, the above would demand that our ancestors would have noticed and reported proto-Saturn's increased size. Do we find it so recorded?

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<sup>1</sup> A. Hislop. *The Two Babylons* (London, 1972), pp. 193-194; See also *God Star*, p. 168.

<sup>2</sup> Eusebius Pamphili, *op. cit.*, I:10:38a.

<sup>3</sup> *Ibid.*, II:1:45c.

<sup>4</sup> As reported in *Chronology & Catastrophism Review* (2000:1), p. 94.

<sup>5</sup> E. R. Milton, "Electric Stars in a Gravity-Less Electrified Cosmos," *S.I.S. Review*, V:1 (1980/81), p. 10.

<sup>6</sup> W. H. Bostick, "What Laboratory-Produced Plasma Structures Can Contribute to the Understanding of Cosmic Structures Both Large and Small," *IEEE Transactions on Plasma Science* (December 1986), pp. 711, 712.

The last thing I would want to do is to offer excuses for the lack of what should not be lacking. It is not that records of proto-Saturn's bloated appearance are not found, but they are much too few in number. Even so, this should not be considered strange since a change in the orb's apparent size, when so much else was happening both on Earth and in the sky, is not something that would have awed all those who noticed. As we shall continue to divulge, proto-Saturn was yet to go through a much more drastic series of transformations for its change in size to have seemed all that dramatic.

Among the few reports of this event that have survived is one from the Eskimos of what is now Alaska. This myth concerns Tulugaukuk, also known as Raven Father, "the creator of all life." Tulugaukuk's recognition as the planetary deity of our concern rests on his association with Earth's celestial environment prior to Creation which is identical to the one that is described in the Saturnian myths of other ancient peoples. Thus, as it is told: "In the beginning there was only darkness...darkness covered everything." And yet "in that darkness, there was already Raven." Although the tale is fraught with quaint folkloric imagery, Raven is even said to have brought light into the world, which light is now misunderstood as "brilliant sunshine." And although it is not said that he increased in size, it is reported that he was still "small and weak" before embarking on Creation.<sup>1</sup> It is therefore understood that he must later have grown big and strong.

A more direct report comes to us from ancient Persia. We have already met Zarathustra's rehabilitated Saturnian god, Ahura Mazda, on a previous page of this work. In ancient Greece, Ahura Mazda became known as Oromazes. It is in a famous treatise by the just as famous Plutarch that, in association with Creation, Oromazes, who was born from the "purest light," is said to have "enlarged himself to thrice his former size."<sup>2</sup>

Another Saturnian deity we have already met in the prequels to this work is the Hindu Yama.<sup>3</sup> As recorded in the *Satapatha Brahmana*, when the "vital airs," that is the light, associated with Creation had dissipated, Yama's body "began to swell."<sup>4</sup>

There will be some who might feel compelled to add to the above list since one encounters other reports of swelling deities in the mytho-historical record. A word of caution is, however, due at this point since these additional bloating gods refer to other planets in a series of events that transpired at a later time, and which we shall be including in their proper chronological order in a future volume of our evolving series. In the meantime, recent astrophysical disclosures can be called upon to compensate for the scarcity of ancient reports concerning proto-Saturn's apparent swelling.

Although the Saturnian scenario that Immanuel Velikovsky reconstructed is immensely different from ours, he was still the first researcher in modern times to realize that Saturn must have flared up in nova-like brilliance sometime in the past.<sup>5</sup> Despite the fact that he mistook its cause, while also misplacing the event in time, he rightly concluded that Saturn must have

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<sup>1</sup> M. Wood, *Spirits, Heroes & Hunters from North American Indian Mythology* (N. Y., 1982), p. 17.

<sup>2</sup> Plutarch, *De Iside et Osiride*, V:370.

<sup>3</sup> *God Star*, pp. 61, 233, 236, 270, 309, 440; *Flare Star*, pp. 114, 231, 235, 306.

<sup>4</sup> *Satapatha Brahmana*, C:6:5:1-7.

<sup>5</sup> I. Velikovsky, "On Saturn and the Flood," *KRONOS* V:1(Fall 1979), p. 6.

exceeded Jupiter in size before its prehistoric flare-up.<sup>1</sup> This is a precept that is actually upheld by astronomers who believe that, early in its formative career, Saturn “collapsed suddenly” while flinging out debris, including dust,<sup>2</sup> very much as we have posited on the strength of the mytho-historical record. Regardless of whether he accepted the details of that theory in their entirety, Fred Hoyle, among others, had little doubt that the present Saturnian planet is the remnant of a larger gas giant.<sup>3</sup>

According to the orthodox theory mentioned above, Saturn’s sudden collapse is said to have transpired “more than 4.6 billion years ago” during the time when the planet is believed to have still been “forming out of the solar nebula.”<sup>4</sup> This, however, would have involved core accretion, the unfolding of which procedure would have required “several million years.”<sup>5</sup> Alan Boss, however, was of an entirely different opinion. While he, too, believes that Saturn had originally been more massive, as so, in his opinion, had the other planets of the Solar System, his particular approach favors planetary development “in 100,000 years or less.”<sup>6</sup> While shying away from the veritable maze of theories that have been proposed to account for planetary formation, we mention this in order to forestall any criticism that might be raised in relation to the much later time we have proposed for the events we have been analyzing. If orthodox astronomers can offer such disparate time sequences for what they believe to be the same procedure, we can sit just as comfortably with our own lesser figure. After all, we have never offered a date for proto-Saturn’s formation, but only for its most recent flare-up.

Although it is presented as a slow process, it is now accepted that brown dwarf stars have a tendency to shrink with age. “Young brown dwarfs should start off much larger than Jupiter and contract slowly to about the size of Jupiter,” so claims Robert Naeye.<sup>7</sup> While we do not hold to the sluggishness of such activity, we note, as we have already done on an earlier page of this very volume, that Saturn is now considered to be the very relic of what had previously been such a brown dwarf star.<sup>8</sup>

What should not be lost sight of is the fact that, with a lesser density due to both its outpouring and electrical upheaval, although reduced in mass, proto-Saturn would have actually swelled in size, just as our ancient ancestors noted.

## THE LOGOS

While the bloated nature of the proto-Saturnian sun does not seem to have led to any particular religious dogmas, various other aspects associated with the same event certainly did. Among these was the nature of what etched itself in the sacred doctrines of various races as

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<sup>1</sup> *Ibid.*

<sup>2</sup> R. Gore, “Voyager 1 at Saturn: Riddles of the Rings,” *National Geographic* (July 1981), p. 10.

<sup>3</sup> D. Salkeld, “Forum,” *Chronology & Catastrophism Workshop* (1988:2), p. 20.

<sup>4</sup> R. Gore, *loc. cit.*

<sup>5</sup> A. P. Boss, “How Do You Make a Giant Exoplanet?” *Astronomy* (October 2006), p. 43.

<sup>6</sup> *Ibid.*, p. 42.

<sup>7</sup> R. Naeye, “Brown-Dwarf Eigma,” *Sky & Telescope* (May 2006), p. 18.

<sup>8</sup> A. P. Boss, *Science* (June 20, 1997); M. Fox, “Rogue ‘Gal Balls’ in Space Break Rules of Solar System, Astronomers Find,” *The Vancouver Sun* (October 6, 2000), p. A13.

God's creative utterance. As we find it recorded in the Book of *Genesis*, Creation was achieved by Elohim through his instructive words. "Let there be light," he said, "and there was light."<sup>1</sup> Let's not lose sight of that.

Many years later, writing in Greek, John the Evangelist referred to these divine directives in the singular as the *Logos*, that is the Word. "In the beginning was the Word," he wrote, "and the Word was with God, and the word *was* God."<sup>2</sup>

This concept has been shown to be derived from Heracleitus of Ephesus and the Stoics, through Philo Judaeus, an Alexandrian Jew who lived in the first century A.D.<sup>3</sup> Yet, even so, in the much older Hebrew *Psalms*, it had already been written that "the heavens were made" by "the word of Yahweh."<sup>4</sup> This was also declared in the *Wisdom of Solomon*, a treatise that was written by another, but anonymous, Jew from Alexandria, sometime in the middle of the first century B.C. In that work, the god Yaw, or Yahweh, is exalted for having created all things by the power of his Word.<sup>5</sup> The same tenet is again expressed in one of the *Non-Canonical Psalms* preserved in the Dead Sea Scrolls in which it is stated that, in his day, Yahweh accomplished Creation "with a word from his mouth."<sup>6</sup>

What *was* this Word?

The same doctrine continued to be expressed later in time during the formative years of Christianity apart and beyond the Gospel of John. We thus find it repeated in the *Poimandres*, a Gnostic dissertation attributed to the anonymous writer nicknamed Hermes Trismegistus. As there recorded, it was the Word that was responsible for Creation. This Word is then said to have developed out of light. God's utterance is in fact referred to in this work as "the luminous Word," which is further clarified to have been "the voice of Light."<sup>7</sup>

In a different Gnostic text from the Hellenized age of Egypt, God is somewhat whimsically said to have achieved Creation not by speaking, but by laughing. "And the God laughed seven times," it is there written. Even the light that led to Creation was said to have been the product of the very first laugh.<sup>8</sup>

A common denominator between spoken words and laughter happens to be sound. It therefore seems that the spoken words, or laughter, that were said to have been responsible for Creation were the sounds that mankind heard during the celestial process he would have witnessed in connection with the brilliant light that was shed by proto-Saturn's flare-up. But while there was more than that, let it not be thought this divine concept is unique to Christianity or the Judaic faith that fed it. It can in fact be traced as far back as Sumer, one of the earliest civilizations that has so far come to light.

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<sup>1</sup> Genesis 1:3.

<sup>2</sup> The Gospel according to St. John 1:1.

<sup>3</sup> F. von Hügel, "Gospel of St. John," *Encyclopædia Britannica* (1959 ed.), Vol. 13, p. 99; P. Fredriksen, *From Jesus to Christ* (New Haven, 1988), pp. 9, 10, but see also pp. 14, 15, & 21.

<sup>4</sup> *Psalms* 33:6.

<sup>5</sup> S. H. Langdon, *Semitic Mythology*, Volume V of *The Mythology of All Races* (N. Y., 1964), pp. 104-105.

<sup>6</sup> F. G. Martínez, *The Dead Sea Scrolls Translated* (N. Y., 1996), p. 312.

<sup>7</sup> W. Barnstone (Ed.), *The Other Bible* (N. Y., 1984), p. 570.

<sup>8</sup> R. Van Over, *op. cit.*, p. 272.



Stephen Langdon was quite ambiguous when he discussed Sumerian beliefs concerning Creation. In one paragraph of his major work he informs us that “there is no evidence” that the Sumerians “had any considered theory” of Creation. But in the very next sentence he discloses that, much like in *Genesis*, Creation was accomplished by the Sumerian Enki, whom he unfortunately presents as a Water-god, through the utterance of “the Word or Logos.”<sup>1</sup>

One word that has given headaches to translators of the somewhat later Assyro-Babylonian mythological texts is *Mummu*, an entity that, with Apsu and Tiamat, was believed to have existed in primeval times.

The conjoined Apsu and Tiamat were the equivalent of the Hebrew *tehom*, translated as “the deep,”<sup>2</sup> the celestial ocean of the ancients, which, in an earlier work,<sup>3</sup> we identified as proto-Saturn’s circumstellar cloud. In association with this entity, the name *Mummu* has been translated as “mother” or “originator.” The word, however, can also mean “form,” “utterance,” or “word.” *Mummu* has thus been seen by some as the *Logos* of Babylonian thought.<sup>4</sup>

The Word, especially when designated as the Word of Wrath, was the possession of the Sumero-Accadian Creator, while also serving as the weapon of those who followed him. Issuing from the Creator’s mouth, the Word went “through the world” causing calamities such as floods, hurricanes, fire, and all the catastrophic events we have seen associated with proto-Saturn’s flare-up.<sup>5</sup> We can therefore see that whatever the Word was, it was certainly a force that packed tremendous energy.

We also meet the Word in Egyptian mythology where it is made to play the same role it does in the beliefs of other people. As recorded in the *Book of the Dead*, when the Creator was still alone in the beginning, the Word itself “came into being,”<sup>6</sup> even though it was also said that God himself was its creator.<sup>7</sup> In the *Pyramid Texts*, the Creator is made to claim he is “the great Word” which existed “when the doing of that which was to be done” was still in a confused state.<sup>8</sup> In fact, as Rundle Clark pointed out, the “real creator was the Word—the primeval speech which came from God”<sup>9</sup>

Although the god Thoth’s association with proto-Saturn still needs to be explored,<sup>10</sup> Hermetopolitan doctrine presented him as the true Demiurge who was believed to have accomplished Creation by the sound of his voice.<sup>11</sup> Memphite theology, on the other hand, presented the Creator as the god Ptah, whom we’ve already met, and who was also believed to have “actualized” Creation “through his tongue, the act of speech.”<sup>12</sup>

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<sup>1</sup> S. H. Langdon, *op. cit.*, p. 277.

<sup>2</sup> Genesis 1:2.

<sup>3</sup> *God Star*, pp. 266-267, 269.

<sup>4</sup> R. Van Over, *op. cit.*, pp. 104, 175; S. H. Langdon, *op. cit.*, p. 290.

<sup>5</sup> *Ibid.*, p. 100.

<sup>6</sup> D. A. Leeming, *The World of Myth* (N. Y., 1990), p. 35.

<sup>7</sup> R. T. Rundle Clark, *op. cit.*, p. 77.

<sup>8</sup> *Ibid.*, p. 60.

<sup>9</sup> *Ibid.*, p. 63.

<sup>10</sup> But see D. N. Talbott, *The Saturn Myth* (N. Y., 1980), pp. 268, 272.

<sup>11</sup> J. Viaud, “Egyptian Mythology,” *New Larousse Encyclopedia of Mythology* (London, 1972), p. 27.

<sup>12</sup> M. Bernal, *Black Athena* (New Brunswick, 1988), p. 140.



Three forms of the god Thoth, who was believed to have accomplished Creation by the sound of his voice.

So, likewise, with the Creator in his form of Ra, or Re. It was when he was still alone, “in his first manifestations” that “the Word came into being.”<sup>1</sup> And, in the *Papyrus of Nesi-Amsu*, the Creator, here named as Neb-er-tcher, is made to say that he evolved himself out of the very primeval matter we have already discussed, at the time when he was the only body in existence, by uttering his own name “as a word of power.”<sup>2</sup>

Additional to that, in a papyrus that dates from Egypt’s Eighteenth Dyasty, it is said of Atum that it is his mouth that “controls the word of creation.”<sup>3</sup> One fanciful text even has Amun emitting “a mighty honk, like a goose,” which burst into the stillness of what has been translated as “the universe,” and which caused “a cosmic reaction” giving birth to the creation of other forms.<sup>4</sup>

What is also interesting is that Re’s “first manifestations” are described as *Khu* which term means “words of power,” but also “brilliant or glorious lights,”<sup>5</sup> thus adding weight to von Hügel’s assimilation of the Logos with light.<sup>6</sup> Beyond all that, the belief in the creative pow-

<sup>1</sup> R. T. Rundle Clark, *op. cit.*, p. 79.

<sup>2</sup> R. Van Over, *op. cit.*, p. 255.

<sup>3</sup> W. Beyerlin, *Near Eastern Religious Texts Relating to the Old Testament* (Philadelphia), p. 14.

<sup>4</sup> F. Fleming, “The Divine Creators,” *The Way to Eternity* (London, 1997), p. 29.

<sup>5</sup> D. N. Talbott, *op. cit.*, p. 12.

<sup>6</sup> F. von Hügel, *op. cit.*

er of the Word was so entrenched in Egyptian minds that it eventually led to the belief in the continuation of life after death through the mystical vocal naming of deceased persons.<sup>1</sup>

The concept was not limited to what is usually termed the Old World. It was just as prevalent in the western hemisphere among the Maya as well as the Nahua who preceded them. The *Chilam Balam of Chumayel* clearly records that, in the beginning, there “sounded the first word of God,” at which “the vastness of eternity shuddered,” and through which Creation was unfolded.<sup>2</sup> It is even stated that the Word “came in,” that is “was created,” before anything else.<sup>3</sup> And so, also, in the Mayan *Popul Vuh* in which Creation is described as having proceeded through the spoken word.<sup>4</sup>

Further south among the Guarani, the Creator, known there as Ñamandu, relied “on the power of speech” to bring matter into existence. In the language of these people, the word transliterated as *n’eng*, through which Ñamandu created whatever needed to be created, has the same connotation as the Greek “*logos* or word-soul,” the very “core of existence.”<sup>5</sup>

We cross over to New Zealand where, in one of their chants, the Maori relate that the original “growth from the void” took place at the behest of Io’s “ancient and original words,” which are also referred to as his “ancient and original sayings”<sup>6</sup> As in the case of the Egyptians, Io’s words, which were used to bring light into the world and dispel darkness, continued to be uttered down into modern times in various rituals associated with the fertilization of barren wombs, for cheering up despondent, feeble, and decrepit minds, and various other worldly woes.<sup>7</sup>

We next stop in India. Like Elohim in *Genesis*, the Hindu Prajapati was also believed to have fulfilled Creation through his divine commands. And again we find that the creative words he uttered turned into lights,<sup>8</sup> which continues to exemplify this odd relationship. This is strengthened further through a hymn to Agni in which the god is lauded as he “whose radiant splendors flow like sounds.”<sup>9</sup>

This is a synonymy that forged itself in the very language in which these doctrines were originally penned. In Sanskrit, the verbs *ghant* and *kumsh* mean “to speak,” but also “to shine.”<sup>10</sup> So do the verbs *rut*, *loch*, and *shik*.<sup>11</sup> Even *om*, that word of power out of which the mystics have made so much, means nothing but “brilliance.”

Thus, while he was still involved in Saturnian research, and much like David Talbott before him, Roger Ashton saw Creation through the spoken word as “the metaphorical utterance

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<sup>1</sup> N. Grimal, *A History of Ancient Egypt* (Oxford, 1992), pp. 105-106.

<sup>2</sup> I. Nicholson, *Mexican and Central American Mythology* (London, 1967), p. 20.

<sup>3</sup> G. Brotherston, *Image of the New World* (London, 1979), p. 186.

<sup>4</sup> T. Lowenstein, “Seven Macaw and the Hero Twins,” *Gods of Sun and Sacrifice* (London, 1997), p. 30.

<sup>5</sup> G. Brotherston, *op. cit.*, p. 173.

<sup>6</sup> H. Hongi, “A Maori Cosmogony,” *Journal of the Polynesian Society*, 16 (1907), pp. 113-114.

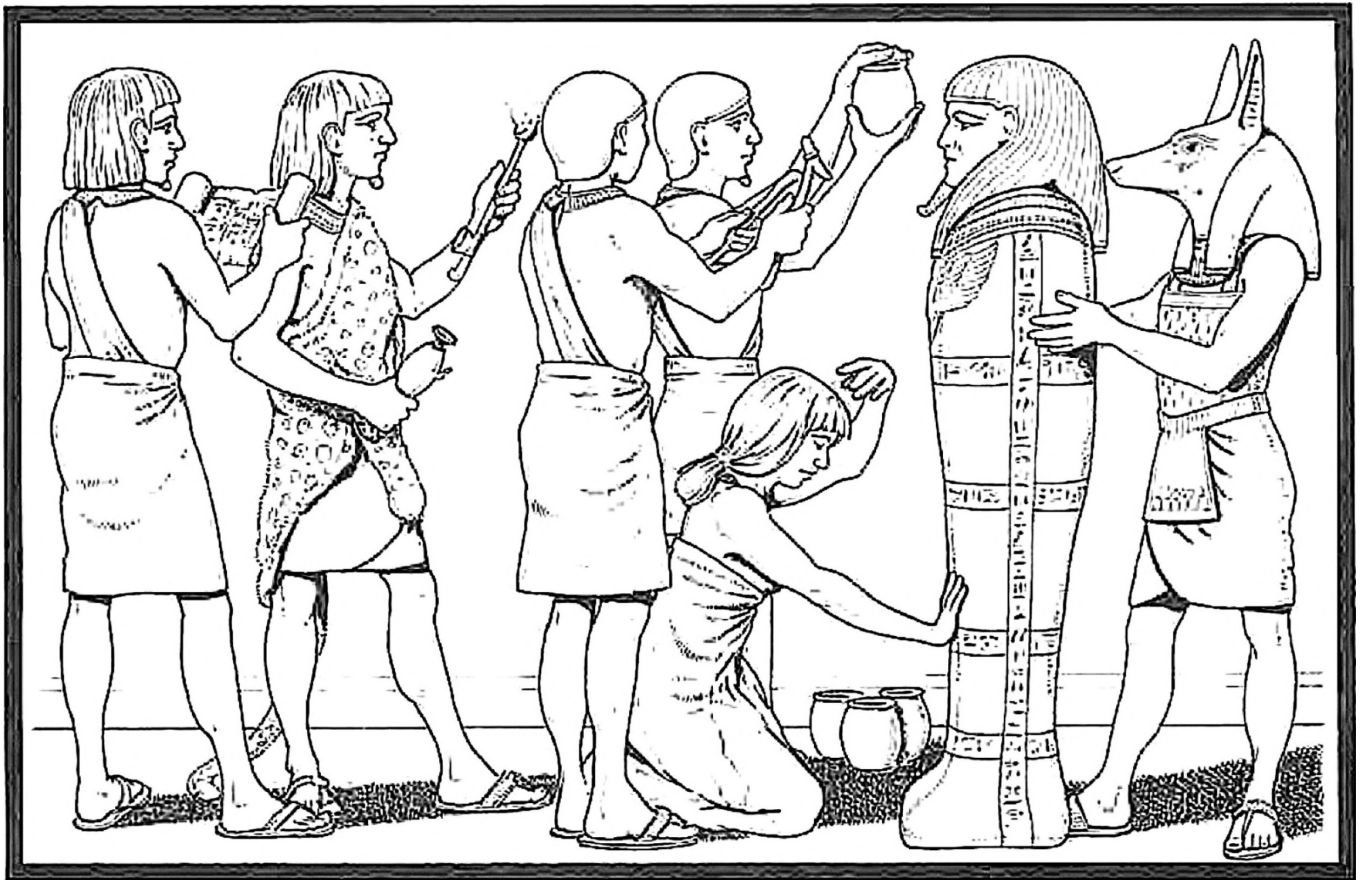
<sup>7</sup> M. Eliade, *Patterns in Comparative Religion* (London, 1996), p. 410.

<sup>8</sup> *Satapatha Brahmana*, XI:5:8:1-2.

<sup>9</sup> *Rig Veda*, X:3:5.

<sup>10</sup> V. S. Apte, *The Practical Sanskrit-English Dictionary* (Delhi, 1965), pp. 359, 420.

<sup>11</sup> *Ibid.*, pp. 804, 821, 920.



**Egyptian funerary rite in which the vocal naming of the deceased was believed to lead to the continuation of life after death.  
(Illustration by John Green.)**

of an expanding wash of brilliant light.”<sup>1</sup>

Similarly, Talbott informs us that this “outflow” of light was exhaled, emitted, or spat out by the Creator “*in a noisy and tumultuous event.*”<sup>2</sup> The implication here is that proto-Saturn’s flare-up consisted not only in the shedding of a blinding light, but also in the propagation of an explosive sound—in effect, a colossal detonation.

It therefore seems that, through his philological studies of ancient sources, John Allegro’s insight that the Word had probably been something seen as well as heard was right on the mark. It was not an abstract notion, he maintained, “you could *see* the ‘Word of God’.”<sup>3</sup> Taken up as he was with the study of ancient phallic worship and the relation he believed this had to the hallucinogenic mushroom known as *amanita muscaria*, this visible word of God was, to him, the fructifying rain with its attending thunder as divine verbalization. Rain and thunder, however, had nothing to do with what came to be known as the Creation, even though celestial reverberation of an entirely different nature was involved in the event.

<sup>1</sup> R. Ashton, “Saturn: The First of the Gods,” unpublished manuscript, p. 11.

<sup>2</sup> D. Talbott, “Mother Goddess and Warrior Hero,” Part One, *AEON* 1:5 (September 1988), pp. 45-46 (emphasis added).

<sup>3</sup> J. M. Allegro, *The Sacred Mushroom and the Cross* (N. Y., 1970), p. 21 (emphasis added).





As the Maori, shown above, relate, Creation took place at the behest of Io's words.  
(Illustration by Y. S. Green.)

As Talbott goes on:

“The unearthly sound associated with this eruption of material gave rise to a pervasive mythical idea—that the fiery ejecta was itself the visible ‘speech’ of the creator. A sea of...‘words,’ viewed in the most concrete sense as a manifestation of the sun god’s creative power, flowed from the god...One of the most common Egyptian words for this chaotic (and comet-like) debris was *Aakhu*—‘words of power,’ ejected particles of fire and light, ‘spoken’ or ‘shouted’ into existence. According to all primary sources in Egypt, these flaming ‘words’ constituted the unorganized matter from which the creator-king fashioned his dwelling in the sky.”<sup>1</sup>

Or, as he had phrased it all even earlier:

“Among numerous races...the solitary god of beginnings is recalled as the voice of heaven—or the Word. And this aspect of the creator is charged with concrete meanings. The texts say that from his central location in the heavens the creator emitted radiant streams of speech and it was through this *visible speech* that he created his celestial dwelling. It is not an abstract notion, but a record of a very tumultuous event involving the eruption of massive quantities of matter from a visible celestial body. ... In other words, the solitary god’s creative speech was nothing more than radiant particles erupting from a central light source.”<sup>2</sup>

Besides *khu*, or *Aakhu*, this debris was additionally known as *kheperu*, which is what the visible words of the Egyptian Creator, “the first things created,” are also called.<sup>3</sup> This *kheperu*, the god is made to claim, “came forth” from his mouth.<sup>4</sup> This, as Talbott also notes, makes *Aakhu*, as well as the *kheperu*, identical to the *paut* we have previously discussed, which *paut* was also stated to have “issued directly from the creator in the form of radiant speech.”<sup>5</sup>

It is therefore quite evident that the shedding of the light by proto-Saturn and the unearthly sound that it emitted were what ancient man remembered as the visible speech that was uttered by the transformed celestial entity in the sky. This would explain why, among the Egyptians, the Creator is actually made to say: “Hearts were pervaded with fear, hearts were pervaded with terror when I was born in the abyss.”<sup>6</sup>

## INTERPLANETARY DISCHARGES

One might argue that, regardless of the vehemence of proto-Saturn’s explosive fury, the sound of its outburst would not have been heard from Earth since sound does not travel in a vacuum. True, but the gases that would have been ejected by the proto-Saturnian flare-up

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<sup>1</sup> D. Talbott, *op. cit.*, p. 46; see also *idem*, “The Mythical History of the Comet Venus,” Part I, *AEON* II:4 (May 1991), p. 33.

<sup>2</sup> *Idem*, as reported by J. Gibson, “Saturn’s Age,” *Research Communications NETWORK*, Newsletter #3 (October 5, 1977), p. 3.

<sup>3</sup> *Idem*, *The Saturn Myth* (N. Y., 1980), p. 74.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Pyramid Texts*, 1039-1040.

would have easily breached the relative short distance to Earth and, coming in contact with our planet's atmospheric envelope, would have been translated into an explosive reverberation that would definitely have been heard by our ancestors.

There is, however, something else that should be considered in this relation, and that involves the very thunder proposed by Allegro in relation to the *Logos*. After all, as Mircea Eliade noted: "Thunder was from the beginning, and still is, the essential attribute of the sky gods."<sup>1</sup> Among various Amerinds, especially the Sioux, divine power was known as *wakan*,<sup>2</sup> a word that lent itself to the names of various deities especially in relation to the very thunder of our discussion. To the Kansas Indians, the thundering god was pure and simply called Wakan. Among the Dakotas, he was known as *Wakantanka*, which word actually translates as "thunder." And to the Omahas, he was *Wakanda*.<sup>3</sup>

Now it is true that, as indicated in the first volume of this series, certain natural phenomena that were considered mysterious and/or daunting by our ancestors were often assumed to be the provenance of deities or other mystical beings when not endowed with a life of their own.<sup>4</sup> And this, of course, included thunder.<sup>5</sup> But while there is a lot to say in favor of that view, there was also a special kind of thunder that was beyond and above the mere terrestrial type we are familiar with. What is being referred to here are thunderbolts and lightning that, under certain conditions, were said to have bridged the gap between celestial bodies at close quarters. This was a belief that continued to be spread by Greek writers down into the first century A.D. Among them were Pliny the Elder and Seneca, who were both convinced that "there were two kinds of thunderbolts, one atmospheric, the other astronomical."<sup>6</sup> As Pliny wrote: "Most men are not acquainted with a truth known to the students of science from their arduous study of the heavens, that thunderbolts are the fires of the three upper planets."<sup>7</sup>

"Heavenly fire is spit forth by the planet as crackling charcoal flies from a burning log. If [or when] such a discharge falls on the Earth, it is accompanied by a very great disturbance in the air...by birth-pangs, so to speak, of the planet in travail."<sup>8</sup>

To the Caribs of the West Indies, the thunder-god, known as Sawaku, was considered to be a bird, but, strange as it may sound, also a star.<sup>9</sup> This is quite amazing because the normal Greek designation for "lightning," according to Marinus van der Sluijs, is derived from the Proto-Indo-European word for "star."<sup>10</sup> So, similarly, with the Latin "lightning," which is re-

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<sup>1</sup> M. Eliade, *op. cit.*, p. 53.

<sup>2</sup> *Ibid.*, p. 21.

<sup>3</sup> *Ibid.*, p. 53.

<sup>4</sup> *God Star*, pp. 197-198, 200-202.

<sup>5</sup> See, for instance, H. R. Davidson, "Thor's Hammer," *Folklore*, 76 (1965), p. 1.

<sup>6</sup> V. Clube & B. Napier, *The Cosmic Serpent* (London, 1982), p. 175.

<sup>7</sup> Pliny, *Historiae Naturalis*, II: 45.

<sup>8</sup> *Ibid.*, II:18.

<sup>9</sup> R. Harris, *Boanerges* (Cambridge, 1913), p. 24.

<sup>10</sup> M. A. van der Sluijs, "Ancient Recollections of Interplanetary Plasma?" *Chronology & Catastrophism Workshop* (2004:1), p.11.

lated to the Tocharian word for “star.”<sup>1</sup> This is an association that is as old as civilization since, as van der Sluijs also noted, the emblem of a star is found depicted on top of the one symbolizing lightning on an ancient Mesopotamian seal.<sup>2</sup> What is of additional interest is that, in Turkish, the word for “lightning” is not only related to “star” but also to “the north,”<sup>3</sup> the very celestial locality of the proto-Saturnian star of our concern.

As in the case of the Caribs, some of the Amerinds from the southeast of North America also represent the thundering spirit as a bird. To them this was a falcon who was said to be a denizen of what has been translated as the Above World.<sup>4</sup> While the Caribs believed their thundering bird to have been a star, some of the tribes of the Amerinds in question often spoke of this thundering falcon as if it was the Sun.<sup>5</sup> Since the Sun and thunder happen to be opposing elements in Earth’s present environment, the above raises the suspicion that, in its origin, the proto-Saturnian sun was actually meant.

The above is further indicated by Morris Jastrow who was among the first to realize that in “many mythologies the sun and lightning are regarded as correlated forces.”<sup>6</sup> As Ev Cochrane, through his research into the subject, could not help but note,<sup>7</sup> Arthur Cook was just as mindful of the fact that the mythological sun-god “has much in common” with the deity of the thunderbolt.<sup>8</sup> In fact, as Cook also brought to the reader’s attention, two of the sun-god’s steeds are named Bronté and Steropé, that is Thunder and Lightning.<sup>9</sup> A depiction on a *krater* from Apulia actually shows Helios in his chariot together with the figure of a thunderbolt.<sup>10</sup> It actually shows more, but we’ll come to that later. In the meantime, that Helios originated as another name for Kronos/Saturn, which was well known to the ancient Greeks, need not be repeated.<sup>11</sup>

Among the Maidu of California, the Creator is known by a name that is translatable as the Great Man. The world he was responsible for, it is said, was originally very hot, which, to us, does not come as a surprise. Easily recognizable as the proto-Saturnian Creator, this Great Man was also said to have been synonymous with thunder.<sup>12</sup>

The thunderbolt’s connection with Saturn is also evidenced by what some researchers have referred to as the rain bull, that heavenly mythological beast said to have “embodied the lethal thunderstorm.”<sup>13</sup> As fanciful as it may at first appear, this particular association derives from the fact that, in his transfigurations, there came a time when proto-Saturn took the shape

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, p. 12.

<sup>3</sup> *Ibid.*, p. 11.

<sup>4</sup> H. Pringle, *In Search of Ancient North America* (N. Y., 1996), p. 141.

<sup>5</sup> *Ibid.*

<sup>6</sup> M. Jastrow, *The Religion of Babylonia and Assyria* (Boston, 1898), p. 160.

<sup>7</sup> E. Cochrane, “Thundergods and Thunderbolts,” *AEON* VI:1 (February 2001), p. 123.

<sup>8</sup> A. B. Cook, *op. cit.*, Vol. 1 (N. Y., 1964), p. 337.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*, pp. 336-337.

<sup>11</sup> See *God Star*, pp. 135-137, where various sources are cited.

<sup>12</sup> T. Lowenstein, “The Spiritual Cosmos,” *Mother Earth, Father Sky* (London, 1997), p. 64.

<sup>13</sup> A. Solomon, “Rock Art in Southern Africa,” *Scientific American* (March 2005 special edition), pp. 47, 48.



of a horned celestial bull. This is why, to the Egyptians, the planet Saturn was *inter alia* known as Heru-ka-pet (Heru-p-ka and/or Heru-ka), which translates as Horus, Bull of Heaven.<sup>1</sup>

The thunderbolt's link to the deity of our concern is also evidenced in Hindu lore where it is stated that Shiva, whom we have seen identified as Saturn, was wont to hurl lightning from his third eye,<sup>2</sup> which third eye will be discussed in a future volume of this series.

That thunderbolts had been cast by the *planet* Saturn, apart from the proto-Saturnian *deity*, was definitely believed in by the Etruscans,<sup>3</sup> as also by the later Romans. The previously mentioned Pliny was quite clear about this. Those "who pursue these enquiries," he wrote, "think that these bolts come from the planet Saturn,"<sup>4</sup> even though some were said to have been cast by Mars.<sup>5</sup> To the Incas on the other side of the world, the planet Saturn was known as Haucha. And they, too, held the planet responsible for discharging lightning with its attending thunder.<sup>6</sup>

One thing that should be made clear is that these interplanetary volatilities would not have merely been energetically enhanced versions of the terrestrial thunderbolts we are familiar with. Although our ancestors would have done their utmost to describe what they had seen, they would have been hampered with the limited vocabulary at their disposal. I say "limited" because they would have had no words to describe what they had never seen before. At best, they would only have been able to compare the world-shattering interactions they were forced to witness with what they were already familiar with.

What makes matters worse is that various words of ambiguous definitions in different languages have been translated as "thunderbolts" and "lightning," when all that really can be said is that extraordinary discharges of a thunderous and fiery nature were seen to have been ejected by planets at close quarters.

These discharges would not even have been all of the same character. One thing we can, however, be quite certain of, is that they all owed their explosive eruptions to cosmic electrical reactions on a colossal scale. As Robert Bass indicated back in 1978: "If planets approached closely, there *would* be electrostatic and electromagnetic interactions not predicted on the basis of orthodox theory."<sup>7</sup>

As if to vindicate his words, when Voyager 1 skipped past the planet Jupiter before the end of that very decade, its instruments recorded a 5 million amp electric current, now known as a flux tube, flowing between the planet and its satellite Io.<sup>8</sup> So, also, was an electric current

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<sup>1</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. 2 (N. Y., 1904/1969), pp. 302-303.

<sup>2</sup> D. Shulman, *Tamil Temple Myths* (Princeton, 1980), p. 58.

<sup>3</sup> G. Dennis, *The Cities and Cemeteries of Etruria*, Vol. 1 (London, 1848), p. 32.

<sup>4</sup> Pliny, *op. cit.*, II:53:138.

<sup>5</sup> *Ibid.*

<sup>6</sup> J. N. Sammer, "The Cosmology of Tawantinsuyu," *KRONOS* IX:2 (Winter 1984), p. 26.

<sup>7</sup> R. W. Bass, "The Celestial Dynamics of 'Worlds in Collision'," *S.I.S. Review* VI: 1-3 (1978), p. 75 (emphasis as given).

<sup>8</sup> N. F. Ness, *et al.*, "Magnetic Field Studies at Jupiter by Voyager 1: Preliminary Results," *Science* (June 1979), p. 982.



Shiva with his symbolic thunderbolts

sheet discovered flowing between our own Saturn and its satellite Dione.<sup>1</sup>

Electric flows between cosmic bodies in our solar family are not presently eruptive, but that's because the planetary systems they belong to are in quasi-stable circumstances. It was entirely different during the instability surrounding the proto-Saturnian system's entry into the present Sun's domain of influence. When these flows interacted with Earth's own electrostatic

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<sup>1</sup> J. M. McCanney, "The Nature and Origin of Comets and the Evolution of Celestial Bodies," Part I, *KRONOS* IX:1 (Fall 1983), p. 34; *ibid.*, Part III, *KRONOS* X:2 (Winter 1985), p. 52.

sheath, the sounds from their outbursts would not only have been heard, they would have reverberated in ear-shattering violence. They were what was remembered as the creative words of God.

# Chapter 14

## Celestial Unveilings

### THE SPIRAL OF CREATION

Among the ancient Zuni, Awonawilona's emitted light was conceived of as a thought rather than a spoken word, which thought took shape and rose as a nebulous substance and/or mist.<sup>1</sup> Other indigenous people, however, continued to believe down into modern times that Creation unfolded in answer to an uttered declaration. Such are the Bambara of West Africa. During Creation, according to the wise men of this tribe, "things emerge in succession from the 'Voice of the Void' in whirlwinds and *words that spiral upwards*."<sup>2</sup> It is the spiraling nature of these "words" that we must next explore.

Although the spiral, as a symbol remains a major topic among those involved in ancient lore,<sup>3</sup> its significance continues to evade some of the most adept of researchers.<sup>4</sup> "The spiral," as Elmer Suhr noted, "is found on the artifacts of so many primitive and early civilized peoples that it is difficult to escape the conclusion that it played an important role in the symbolism of their thinking."<sup>5</sup> And yet, despite Suhr's attempted identification of the objects that might have lent their shape to ancient man's preoccupation with this symbol, including such mundane things as mussel shells and plants,<sup>6</sup> he remained at odds in explaining the similarity of designs in ancient spiral artworks. As he had it stated: "Along with their frequent occurrence in widely separated areas of Neolithic culture, it is remarkable that many spiral designs of a similar pattern are also found in different localities."<sup>7</sup>

"Such combinations of spirals occur in widely separated areas, to such an extent that it is very difficult to assign their origin to a single area or people. The so-called diffusion theory and another based on decorative appeal have not explained satisfactorily either the origin or the meaning of the spiral."<sup>8</sup>

On the basis of a paper written by Len Saunders,<sup>9</sup> Laurence Dixon attempted to explain the proliferation of spiral images among Britain's Neolithic art as having risen through ancient

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<sup>1</sup> R. Van Over, *Sun Songs: Creation Myths From Around the World* (N. Y., 1980), pp. 23, 24.

<sup>2</sup> R. Bastide, "Africa: Magic and Symbolism," *Larousse World Mythology* (London, 1972), p. 528 (emphasis added).

<sup>3</sup> See, for instance, M. Gimbutas, "The Temples of Old Europe," *Archaeology* (November-December 1980), pp. 44-45, 48.

<sup>4</sup> See here, for instance, F. Fisher, "On Number as Artifact," *HORUS* II:3 (Fall 1986), p. 22.

<sup>5</sup> E. G. Suhr, *The Spinning Aphrodite* (N. Y., 1969), p. 72.

<sup>6</sup> *Ibid.*, p. 75.

<sup>7</sup> *Ibid.*, pp. 75-76.

<sup>8</sup> *Ibid.*, p. 76.

<sup>9</sup> L. Saunders, "A New Theory of Abstract Rock Art in the British Isles," unpublished.



man's surveillance of the Moon's changed motion across the sky through a force that would have acted on it. According to him, such a force could have been gravitational, electromagnetic, or plasmatic, caused by an impacting or an intruding foreign body. Any of these forces could have thrown the Moon's orbital plane into a spiral motion that "might" even "have endured for centuries."<sup>1</sup> It is not stated what it is about these spirals that led him or Saunders to associate them with the Moon. What is worse, as we find it stressed in ancient lore, the Moon was not even visible during the time in question.<sup>2</sup>

Christopher Tilley, on the other hand, believes the spiral owed its ancient grip upon humanity through the mystical power it had somehow become imbued with. He based this view on the spirals that are engraved on the stones that are contained within, and outside, the 5,000-year old megalithic passage tomb of Newgrange in Ireland. This magical symbol, so he tells us, was used to invoke a sensory experience within the darkened confines of the tomb.<sup>3</sup> In this respect, Tilley draws attention to what he believes to be the purposeful hiding and intentional obliteration of the symbol in question.

The spirals that have drawn the most attention among visitors to Newgrange are the ones inscribed on the main kerbstone that lies flat across the entrance to the tomb. There are 97 of these kerbstones surrounding the monument, but, other than the one across the entrance, they contain "very few visible spirals," most of which "occur on the backs of the stones facing into the cairn, forever hidden."

Prominent examples of the spiral had once adorned the front of one other slab, situated next to the entrance stone, but its decoration has been "virtually obliterated" by the very builders of the tomb by pecking at its surface.

Nor are these the only instances. Thus, throughout Tilley's entire work, we keep running into descriptions of how "pick dressing" has "obliterated earlier motifs," how various spiral motifs have been "picked over," and how other spirals in the tomb's passageway are "entirely hidden."<sup>4</sup>

"Other stones possess a little decoration but this is either partially obscured through later surface picking, hidden beneath ground level, or only present on the partially exposed side rather than front and main faces of the stones."<sup>5</sup>

The corbels beneath the roof-stone are also highly decorated, but, even here, "some of the decoration is still not visible as it disappears" under other corbels. Two other roof projections "have much decoration on their upper faces," but these, too, would have been "completely

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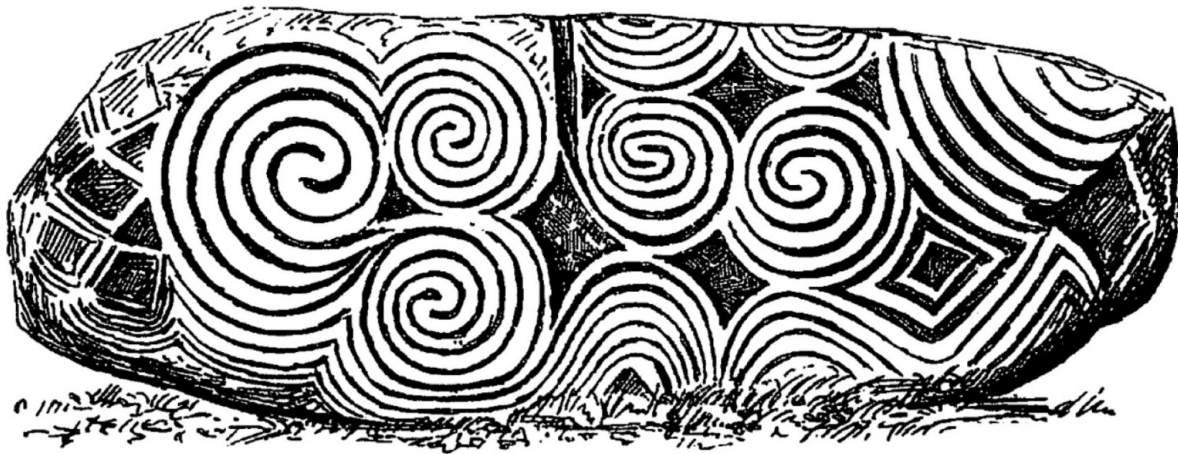
<sup>1</sup> L. Dixon, "On the Rotation of the Moon's Orbital Plane," *Chronology & Catastrophism Workshop* (2007:1), pp.7-9.

<sup>2</sup> All of which has been covered in previous volumes of this series.

<sup>3</sup> C. Tilley, "Architectural Order and the Ordering of Imagery in Malta and Ireland: A Comparative Perspective," in D. A. Barrowclough & C. Malone (eds.), *Cult in Context: Reconsidering Ritual in Archaeology* (Oxford, 2007), p. 132.

<sup>4</sup> *Ibid.*, p. 127.

<sup>5</sup> *Ibid.*



Spiral motifs on the main kerbstone facing the entrance to the Newgrange passage tomb.  
(Illustration by George Coffey.)

hidden during the Neolithic construction of the passage.” And there is more. As Tilley himself exclaims: “All this decoration,” but still “mostly hidden.”<sup>1</sup>

To Tilley, it was all intentional. It had to have been because the construction of the place makes it obvious that this is the way these decorated stones were originally placed. “Newgrange,” he wrote, “might be described as a textbook example of the art of concealment employing the full range of possible techniques available.” These techniques included the complete hiding of decorated stones “during the building of the tomb either in the roof or in the floor making sure that these images could never be seen or experienced.” Other procedures involved the placing of decorated stones “in obscure areas” where the images are not likely to be seen; the placing of decorated stones so that parts of them lie over others “so that the full extent of the image field remains invisible;” pecking “over images so as to partially or completely obliterate them;” and various others.<sup>2</sup>

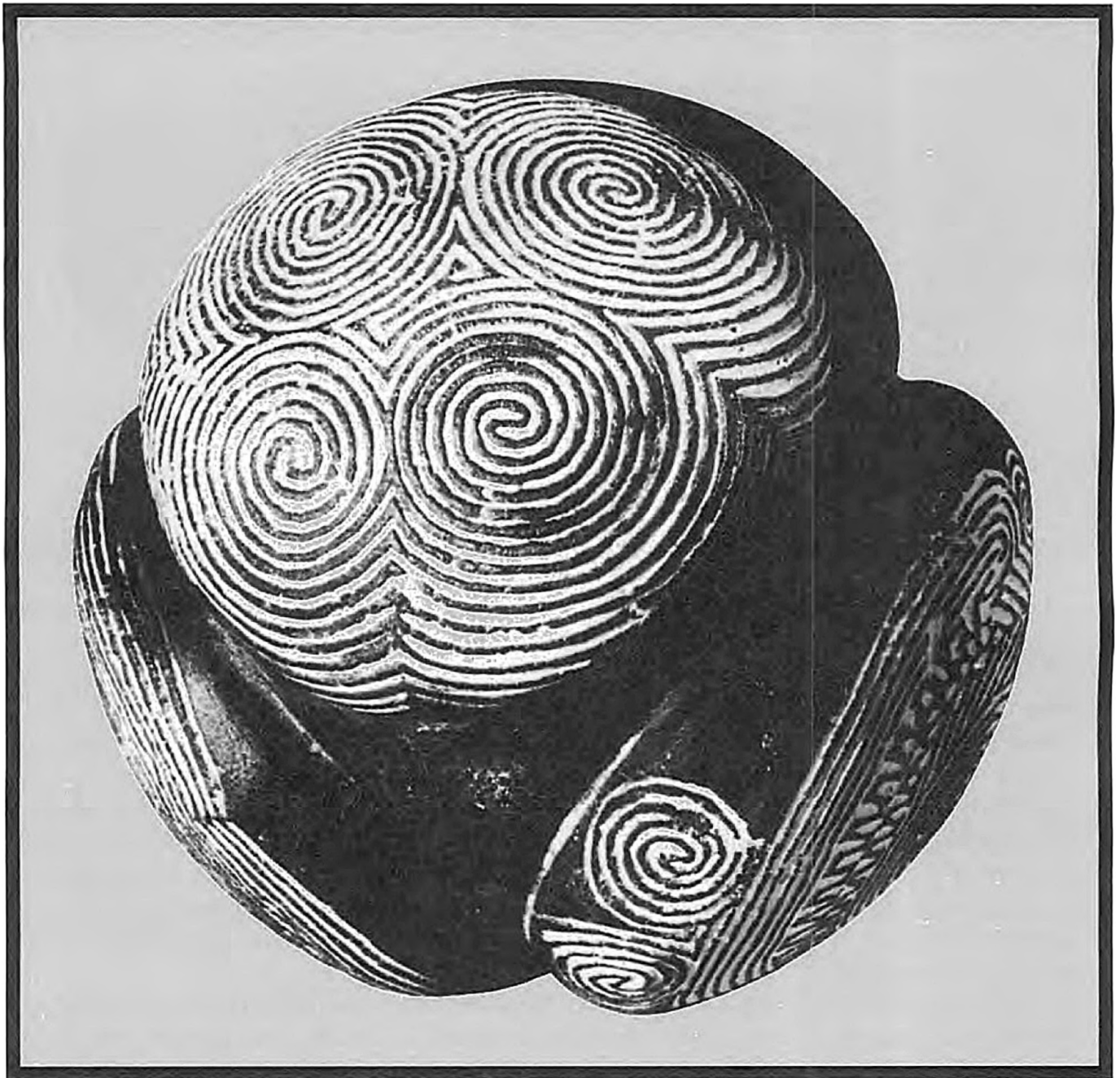
There were those who had suggested that the overwhelming effect of such an interior was to induce sensory deprivation. Tilley, however, does not agree, claiming that, in fact, the reverse can be argued. “[R]ather than creating conditions for sensory deprivation, the experience of being inside the *temple* heightened sensory perception in relation to the burial and other rites that took place.”<sup>3</sup>

Other than those involved in the actual deposition of the dead—remains of human cremation really—it is more than likely that rites would have been conducted outside the structure rather than within the confines of its narrow interior passage. Notice that in order to make the above sound more palatable, Tilley here refers to the tomb as a temple.

<sup>1</sup> *Ibid.*, p. 128.

<sup>2</sup> *Ibid.*, p. 129.

<sup>3</sup> *Ibid.* (emphasis added).



Spirals on one of several stone balls, believed to have been used for divination, that were found in the Scottish passage graves at Glas Towie.

(Photograph courtesy of the National Museum of Antiquities of Scotland.)

The main problem with Tilley's view is that it is inconceivable that ancient man would have gone to all that trouble in the time-consuming decoration of all these hard stones only to obliterate their designs by pecking over them or hiding them entirely from view. This, in fact, comes close to irony when Tilley tells us that the "emphasis on the spiral is the unique and memorable signature of this tomb."<sup>1</sup>

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<sup>1</sup> *Ibid.*

Some questions that come to mind are: Why would the spiral have been chosen to induce the sensory experience Tilley believes it to have been responsible for? Why a spiral? And in what way would its concealment and/or obliteration have aided in this experience?

George Eogan, whom Tilley himself cites, had hit upon the answer to the Newgrange riddle when he suggested that a particular stone with half obliterated motifs “is placed upside down and was brought from an earlier monument.”<sup>1</sup> As far as we are concerned, *all* the stones with hidden, half hidden, and obliterated designs were brought from another site—or more than one—where they would originally have been considered of more importance. Rather than being a “memorable signature” of the tomb, Newgrange seems to have been built by a congregation for whom the spiral had absolutely no significance. The slabs had been merely there for them to use. And they were used. It was not the first time that stones from an older construction were haphazardly utilized in the building of a newer one, and it certainly wasn’t to be the last.

There is no point in trying to find out what ancient man understood by the spiraling motifs he incorporated on so many objects and across so many terrains unless one studies what ancient man himself had to say about the subject. There have been others who have viewed man’s derivation of the spiral through some sort of mystical experience, but, unlike Tilley, most of them have had to come to grips with its connection to Creation. As one of them succinctly phrased it, the mesmerizing influence this symbol had on ancient man was due to his belief that “chaos” had turned into “cosmos” through a “spiral movement.”<sup>2</sup>

A mystical experience, in itself, might not have led to ancient man’s obsession with the spiral, but it definitely ended up playing a significant role in his early religious life.<sup>3</sup> It has not only been engraved on stone slabs in some of the earliest ritual places that have so far come to light, but also on mundane rock formations just about all over the world. Even some of the oldest clay seals that have been discovered at Çatal Hüyük, one of man’s earliest habitations, were used to imprint spiral pictograms.<sup>4</sup> To be sure, even when it comes to later Egypt, the spiral is not only the oldest hieroglyph that has so far come to light,<sup>5</sup> but it ended up as one of the most royal of insignias incorporated in the crowns worn by pharaohs, but also deities, from the early dynastic periods down into Ptolemaic times.

The association of the spiral with the proto-Saturnian deity is evident in an image of Vishnu at Andhra Pradesh, in India, where the divinity is depicted as an actual serpent coiled into a spiral.<sup>6</sup> The same symbol was also highlighted by the Aztecs in their portrayal of Quetzalcoatl’s breastplate as “a conch shell, cut transversely to reveal its inner spiral shape, like the eye of a storm or the coils of a snake.”<sup>7</sup> This spiral decoration was actually referred to as

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<sup>1</sup> *Ibid.*, p. 127.

<sup>2</sup> J. Purce, *The Mystic Spiral: Journey of the Soul* (London, 1974), p. 29.

<sup>3</sup> F. Hitching, *The World Atlas of Mysteries* (London, 1979), p. 157.

<sup>4</sup> C. Perles, *The Early Neolithic in Greece* (Cambridge, 2001), p. 56,

<sup>5</sup> M. Betrò, *Hieroglyphics* (N. Y., 1996), p. 194.

<sup>6</sup> D. Talbott, “Past History of the Planets: The Polar Configuration (Past and Present Research),” *Chronology & Catastrophism Review* (2008), p. 82.

<sup>7</sup> N. Baldwin, *Legends of the Plumed Serpent* (N. Y., 1998), p. 87.





**Spirals on a slab in the 4800-5000-year old megalithic temple of Hal Tarxien, Malta, Europe.**  
(Photograph by the author.)

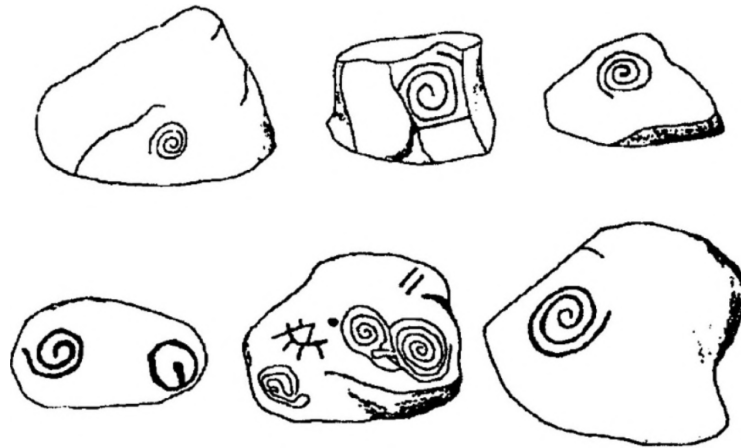
“the necklace of the whirlwind.”<sup>1</sup> The conch was also sacred to Kukulcan, who was merely the Mayan equivalent of Quetzalcoatl. To this day, pendants and other trinkets made from the spiraling innards of the conch remain a favorite with the locals of Mexico’s Mayan regions as well as foreign travelers. In fact, spiral pendants became popular in various other countries. Among some, the relation of this symbol to the deity’s creative power lent it special significance in human reproduction especially as a protective amulet against miscarriages.<sup>2</sup>

These various representations of the spiral must not all be seen as indicating one and the same phenomenon. While they all relate to Creation, it is more than obvious that the event in question involved more than one spiraling movement. We shall be sorting out these different, even if related, episodes as we dig deeper into the subject in future volumes of this series.

Those who are familiar with our past publications might have noticed that, in a previous volume, we had identified the whirlwind associated with Quetzalcoatl’s conch as the axial

<sup>1</sup> *Ibid.*

<sup>2</sup> S. Winifred & A. M. Blackman, “An Ancient Egyptian Symbol as a Modern Egyptian Amulet.” *Annuaire de L’Institut du Philologie et d’Histoire Orientales*, Vol. III (1935), p. 93.



Spiral petroglyphs from San Blas, Mexico.  
(Illustration courtesy of the University Museum of Southern Illinois.)

Birkeland current that formed proto-Saturn's polar column.<sup>1</sup> This also brings to mind the whirlwinds of the Bambara, mentioned above, in relation to the rising spirals of Creation. The correlation of the axial Birkeland current, or *axis mundi*, with the proto-Saturnian emanations that led to what came to be known as the Creation will continue to develop as we trudge through this convoluted spiraling maze.

In the meantime, despite his muddling of much that the mytho-historical record has to offer, Suhr was still cognizant of the fact that our ancient fathers held to the belief that Creation had involved vortical motion.<sup>2</sup> While Suhr had the ancient Greeks in mind,<sup>3</sup> this association continued to be held, even by primitive tribes such as the Dogon of West Africa, down into modern times. Once again, as in Suhr's case, it is unfortunate that various misconceptions were introduced by Germaine Dieterlen and Marcel Griaule in their description of what these tribesmen were themselves attempting to describe. It can however be stated with assurance that the Dogon demiurge, known to them as Amma, created all that had to be created in a spiraling manner while he spun and danced around.<sup>4</sup> Nor are the Dogon the only primitive indigenes who continue to hold on to such memories. As shown in their bark paintings, the spiral of Creation is visualized by the Australian Aborigines as a coiling serpent, a motif they continue to depict in their more recent art.<sup>5</sup>

Rather than words or thoughts, the substance emitted by Amma, the Creator of the Dogon, is believed to have been seeds, or shoots. But even these are said to have grown "in a conical spiral motion."<sup>6</sup> The Dogon will tell you that these seeds are those of a plant which botanists have named *Digitaria exilis*. The star that is said to have shed its seeds has therefore

<sup>1</sup> *God Star*, pp. 436-437.

<sup>2</sup> E. G. Suhr, *Before Olympus* (N. Y., 1967), p. 128.

<sup>3</sup> *Idem*, *The Spinning Aphrodite* (N. Y., 1969), p. 77.

<sup>4</sup> M. Griaule & G. Dieterlen, *Le Renard Pale* (Paris, 1965), pp. 163, 168.

<sup>5</sup> W. Caruana, *Windows on the Dreaming* (Canberra, 1989), pp. 63, 67.

<sup>6</sup> R. K. G. Temple, *The Sirius Mystery* (N. Y., 1976), p. 42.



**New Kingdom pharaoh wearing the double crown of Upper and Lower Egypt  
incorporating the cosmic spiral  
(Illustration by Tom Tierney)**





Modern Mayan spiral pendants for sale at Playa del Carmen, Mexico.  
(Photograph by the author.)

been referred to by mythologists as the “Digitaria star.” But in the language of the Dogon it is rendered *po tolo*, a play on words derived from *polo to*, which carries the significant meaning of “profound beginning.”<sup>1</sup>

As strange as it may sound, the idea that Creation owes its unraveling to some sort of seeds was also held by the Greek philosopher Anaxagoras who was accused of blasphemy and had to flee for his life. Although by these seeds he more than probably meant particles, he did believe in a progressive vortex of these seeds which whirled through what he claimed to be the beginning of things.<sup>2</sup> He was, for this, criticized by both Plato and Aristotle, to say nothing of the ridicule that was heaped upon him by Aristophanes in one of his stage comedies. As with spiral pendants, the idea of spinning seeds also gave birth to a series of associated superstitious innovations, such as the spinning of tops during sowing time and related festivals in

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<sup>1</sup> *Ibid.*, p. 50.

<sup>2</sup> E. G. Suhr, *loc. cit.*, p. 35.





**The Dogon's own depiction of the spiral of creation.**

order to encourage the germination of seeds.<sup>1</sup> "[T]he custom was a means of encouraging the growth of the seed by imitative magic and implies that germination, whether in the soil or in the womb, is promoted by a whirling or spiral motion."<sup>2</sup>

Spinning tops were not the only deep-seated acts that took hold of those who felt it crucial to propagate these past events in ritualistic celebration. A long cable coiled into a spiral shape was ritually carried by the Aztecs in one of their religious demonstrations.<sup>3</sup>

More importantly, the spiral's connection with the utterance that was said to have heralded Creation led to its use by ancient societies to symbolize speech.<sup>4</sup> Words that spiral upwards as the Voice of the Void are not, therefore, unique to the Bambara. On the other hand, that the Creator spoke words that were lightning was a belief retained by Sioux elders in "things remembered, things forgotten" and "re-remembered."<sup>5</sup> As we have seen, this accords with the belief of those who claim that the Word responsible for Creation was composed of light.

### **COSMIC EMISSIONS**

That ancient man was trying to describe the discharge of luminous material in immense spiraling structures from the proto-Saturnian orb seems quite evident. Most of this material would have consisted of proto-Saturn's atmospheric gases. That such gases would have been explosively expelled due to proto-Saturn's volatile flare-up is understandable. But why would such emissions have assumed *spiraling* structures?

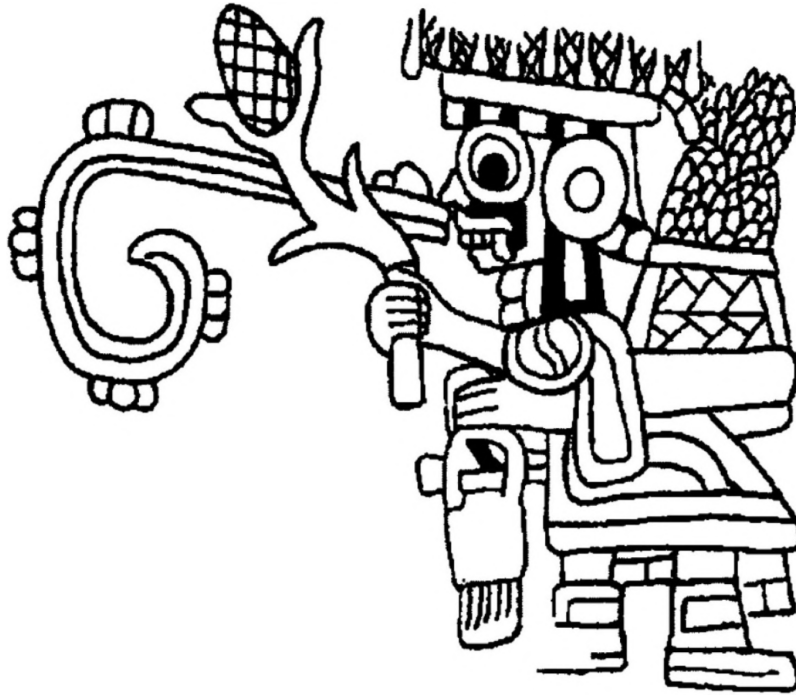
<sup>1</sup> *Ibid.*, p. 36.

<sup>2</sup> *Ibid.*

<sup>3</sup> Z. Nuttall, *The Fundamental Principles of Old and New World Civilizations* (Cambridge, 1901), p. 145.

<sup>4</sup> See here, G. Mallery, *Picture Writing of the American Indians*, Vol. Two (N. Y., 1893/1972), p. 719; G. Ortiz de Zarate, *Petroglifos de Sinoloa* (Mexico, 1976), pp. 61-62, 117; R. Smith, "Rock Art of the Sierra de San Francisco: An Interpretive Analysis," in K. Hedges (ed.), *Rock Art Papers*, Vol. 3 (San Diego, 1985), p. 36.

<sup>5</sup> R. Ordoes & A. Ortiz, *American Indian Myths and Legends* (N. Y., 1984), pp. 129, 132.



**The Aztec god Tlaloc shown with the spiraling symbol signifying speech.**

In point of fact, the loss of stellar atmospheres to space in great spiral patterns has been known for quite some time. This, however, is usually attributed to binary systems in which one member of such double-star couplings draws the atmospheric gases of its partner toward itself. Due to the stars' rotation around a common center, the atmospheric stream being attracted tends to curl into a spiraling shape which space artists are fond of dramatizing.<sup>1</sup>

In our case, however, we are also dealing with electric currents in a confined plasmatic venue. As laboratory experiments have shown, such currents have a tendency to generate discharge patterns in the form of radial streamers and/or spirals.<sup>2</sup> Despite their modest size, these patterns are in keeping with actual cosmic events.<sup>3</sup>

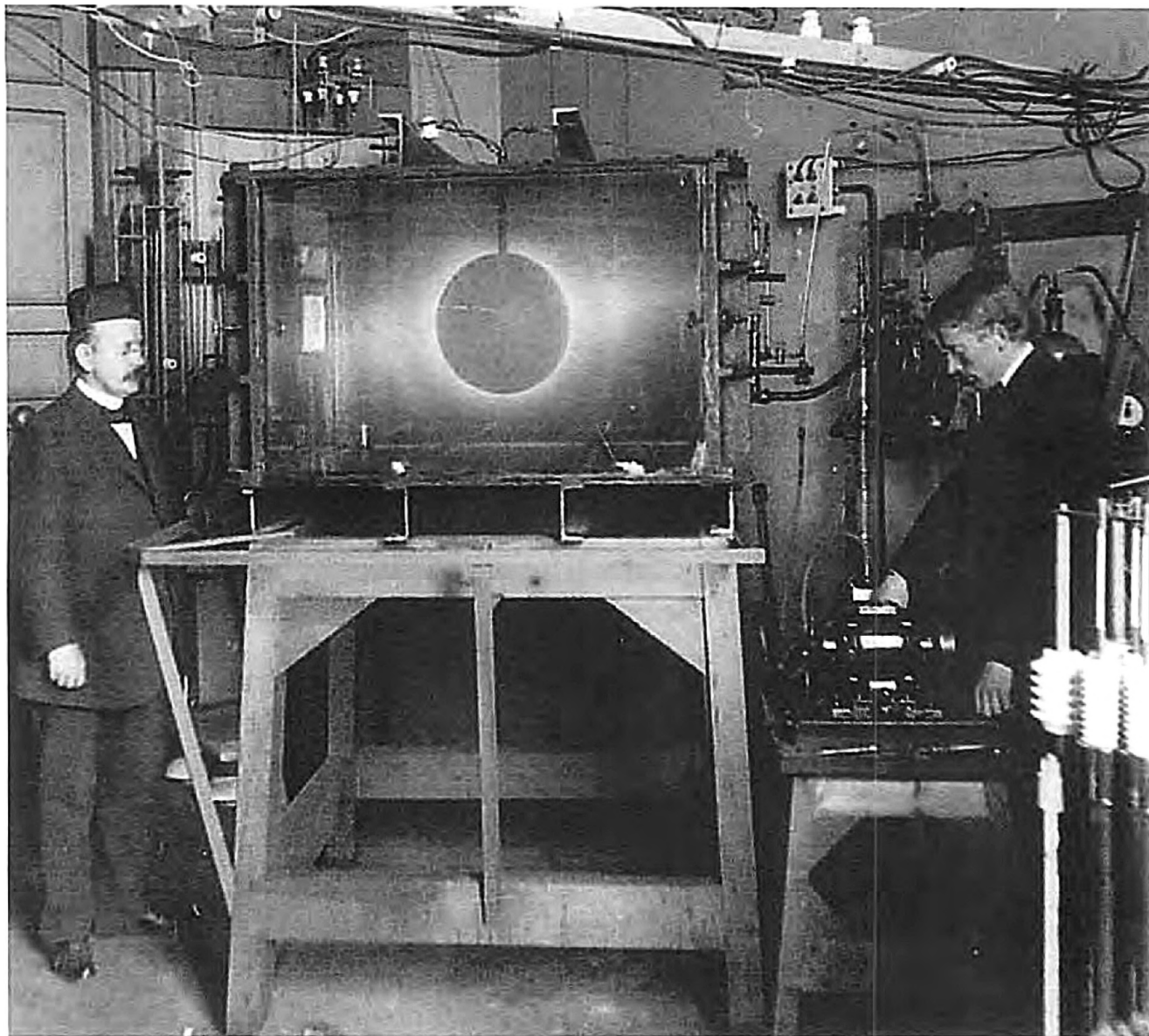
Such experiments were conducted by Kristian Birkeland at the beginning of the 20th century through the use of the electromagnetic global terellas we have already touched upon. By varying the electrical energy of one of these globes, radiant streamers were made to radiate off its surface. These "luminous branches," to use Birkeland's own terminology, usually appeared "turning in a spiral about the eruptive spot and near the surface of the globe."<sup>4</sup> Birkeland

<sup>1</sup> See, for instance, L. Barnett, *The World We Live In* (N. Y., 1955), pp. 284-285; C. Sagan, *Cosmos* (N. Y., 1983), p. 215.

<sup>2</sup> W. Thornhill & D. Talbott, *The Electric Universe* (Portland, Oregon, 2007), p. 37.

<sup>3</sup> *Ibid.*

<sup>4</sup> K. Birkeland, *The Norwegian Aurora Polaris Expedition 1902-1903*, Vol. 1, Section 2 (Oslo, 1913), p. 664.



**Kristian Birkeland—on the left—experimenting with one of his terellas.**

himself compared these strands to “the enormous eruptions on the Sun,” which we now refer to as solar prominences.<sup>1</sup> He also drew attention to the likeness they bore to galaxies, then simply known as nebulae, many of which present a spiral form.<sup>2</sup> It is well known in plasma physics that this is due to the magnetic fields that flow through space. As Stephen Smith explains: “Those magnetic fields...trace out the spiral arms in galaxies because electric current flows through them, both from the intergalactic circuit feeding the galaxy and from the homopolar action of the galaxy itself.”<sup>3</sup>

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, p. 678; see also W. Thornhill & D. Talbott, *op. cit.*, p. 47.

<sup>3</sup> S. Smith, “Where the Long Shadows Fall,” *thunderbolts.info* (November 3, 2010); see also W. Thornhill & D. Talbott, *op. cit.*, p. 37.





**Spiral galaxy M81.**  
(Photograph courtesy of NASA.)

It can thus be seen that spiral emanations are not only common throughout the cosmos, they actually seem to be the major form assumed by the discharge of energized material. Even some of Saturn's present rings orbit the planet in spiral patterns.<sup>1</sup> The one known as the F-ring, a thin outer wisp consisting of a "one-arm trailing spiral," winds itself "at least three times" around the planet, while it continues to tighten itself into what may end up as a totally enclosed ring.<sup>2</sup>

Related phenomena are not even necessarily displayed in exactly the same way. Here on Earth, as also on the planet Jupiter, auroral concentrations tend to form a ring around the poles. But on Saturn they often shape themselves into an open spiral.<sup>3</sup>

Let it not, however, be assumed that the depiction of each and every spiral on ancient artifacts stood for its original symbolic meaning. Even when actually echoing the past events we

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<sup>1</sup> *New Scientist* (January 28, 1982), p. 235.

<sup>2</sup> R. R. Britt, "Saturn Surprise: One Ring is Actually a Spiral," *space.com* (November 28, 2005).

<sup>3</sup> R. Cowen, "Spying Saturn's Light Show: Anomalous Aurora Dazzles Scientists. (This Week)," *Science News* (February 19, 2005), p. 116.



have been analyzing, in time, the spiral's aesthetic character took over as a mere decorative design and was utilized in that manner on various objects by various ancient societies. As Raymond Thompson noted: "Any history of symbols must begin at the earliest stage possible, because in the course of time they come to be used as decorative motifs by people to whom they have no meaning, or a different meaning or, worst of all, who take them to be different objects."<sup>1</sup>

A fair example of this situation came to light when a Naga from Assam, in India, informed an archaeologist that stone masons among his people continued to chip ancient patterns on megaliths simply because it was the traditional thing to do.<sup>2</sup> This is also quite apparent in the Coclé culture, believed to have risen around 500 A.D., that was still flourishing in Panama at the time of the Spanish conquest. Despite the culture's late flowering, its members were still aware of their much earlier symbolic heritage even if, by then, the cosmic meaning behind it was just about forgotten. Yet even so, the iconic spiral was by then so ingrained in the Coclé's artistic repertoire that, together with other cosmic symbolism, it continued to be employed in the culture's art almost to an excess. This is especially apparent in the spiral's extensive depiction on the great number of pottery vessels that were retrieved in the early 1930s through the excavation of the culture's burial sites.<sup>3</sup> Any attempted reconstruction of ancient cosmic events through the interpretation of these, and similar, artifacts should therefore be conducted with the utmost caution.

## THE ERUPTIVE FOCAL POINT

One would normally think that, because of its axial spin, proto-Saturn would have flung its spiraling rubble equatorially. That, for instance, is the manner in which the ejected gases spiraling between stars in the binary systems we mentioned above have been depicted. When it comes down to brass tacks, however, it is not really known if that is the actual manner in which these particular atmospheric constituents are dispelled. On the other hand, whether they constitute partners in binary systems, as some believe, or not, flaring stars are now known to discharge axially along their polar jets.<sup>4</sup> This accords with what transpired to proto-Saturn since, as we have indicated, the impetus behind its explosive flare-up was the electrical retraction of its axial Birkeland current.<sup>5</sup> Judging by what is presently known about them, brown dwarf stars react in a similar manner, discharging along their jets.<sup>6</sup> This results with the eruptions being focused on their poles,<sup>7</sup> which is why we have so portrayed our own version of the flaring proto-Saturn.<sup>8</sup>

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<sup>1</sup> As quoted by M. Robbins-Dexter in her Preface to O. G. S. Crawford, *The Eye Goddess* (Oak Park, Illinois, 1991), p. 6.

<sup>2</sup> O. G. S. Crawford (see above), p. 68.

<sup>3</sup> S. K. Lothrop, *Coclé: An Archaeological Study of Central Panama—Part II: Pottery of the Sitio Conde and Other Archaeological Sites* (Cambridge, Massachusetts, 1942), *in toto*.

<sup>4</sup> S. Starrfield, *et al.*, "Prelude to Disaster," *Sky & Telescope* (October 2009), p. 30.

<sup>5</sup> *Flare Star*, pp. 279-280.

<sup>6</sup> See depiction on our previous page 91.

<sup>7</sup> Shown on page 108.

<sup>8</sup> As depicted on pages 109-110.



Spiraling patterns on Coclé pottery from Panamá.  
(Illustrations courtesy of Samuel Kirkland Lothrop.)

The polar ejection of the material by proto-Saturn is also consistent with the nature of the symbolic representations bequeathed us by our ancestors. Most of the spirals with which Neolithic man decorated his ritual places, as well as many of his artifacts, are of the tight, rather than the open, type. In other words, the spirals tend to curl out from a central point, rather than from one along an already expanded coil. What this indicates is that the spiral of Creation had wound itself outward, in similar manner, from a specific hub. In keeping with the axial discharge of material from cosmic bodies, as per above, this generative hub would have been one of proto-Saturn's polar extremities. Given that Earth was still suspended right "beneath" proto-Saturn, for a while our ancestors would only have been able to see the proto-Saturnian rubble escalating out of its south pole.

As it transpires, plasma continues to erupt from Saturn even as these words are being written. Data from NASA's Cassini spacecraft have shown that "plasma ejections, electrical currents and Saturn's magnetic field—phenomena that are invisible to the human eye—are partners in an intricate choreography."<sup>1</sup> The "islands of pressure" formed by these periodic ejections rotate around the planet in a manner that has been likened to "an unbalanced load of laundry on spin cycle."<sup>2</sup>

<sup>1</sup> "Hot Plasma Explosions Inflate Saturn's Magnetic Field," *saturndaily.com/reports* (December 17, 2010).

<sup>2</sup> *Ibid.*

Saturn's present south pole, which would have been the pole facing Earth, continues to exhibit a colossal storm much in the manner of a terrestrial hurricane complete with a well-developed eye that is ringed by towering clouds. That, however, is where the similarity ends. In fact, astrophysicists themselves have described the storm as both unique and puzzling.<sup>1</sup>

To begin with, terrestrial hurricanes form when moist air flows inward across oceanic tracts. The planet Saturn, however, is bereft of oceans, which calls for a totally different origin for its hurricane. There is also the storm's staggering size. Its diameter is approximately 5,000 miles—8,000 kilometers—across. If that figure, as figures sometimes do, does not immediately impress, it constitutes about two thirds of Earth's diameter, big enough to swallow all of North America.

The height of the hurricane's encircling clouds are from 20 to 45 miles—30 to 70 kilometers—high, which makes them up to five times higher than what is achieved by terrestrial ones. In keeping with our present subject, two enormous spiral arms of cloudy material extend from the hurricane's central ring.

As on Earth, the winds created by this particular storm blow in the same direction as the planet's axial spin, which is clockwise. The speed of these winds, however, are well above those on Earth, reaching as much as 350 miles—550 kilometers—per hour.

The greatest difference between this hurricane and those on Earth is that terrestrial ones are free to move around, while the Saturnian one is firmly locked to its south pole. And while terrestrial hurricanes come and go, Saturn's south polar storm simply stays put. First detected in 2003 by NASA's Cassini spacecraft, the storm was still in place when these words were put on paper in the year 2011.

It is not known how long the storm has been ranging or how long it will endure. And, to tell the truth, it cannot be rightly claimed to be a relic of the much vaster cyclone that erupted from proto-Saturn following its flare-up during its infiltration of the Sun's plasmatic sphere. Even the storm's spiraling arms are not necessarily indicative of that event since, as we have seen, spirals can be part and parcel of various cosmic outbursts. After all, even terrestrial hurricanes exhibit spiraling clouds.

There is, however, an additional feature that speaks in favor of Saturn's present south polar storm as a vestige of its primordial flare-up, and that consists of the high temperature associated with that very pole. While Saturn continues to leak its own internal heat, its south pole has surprisingly been found to be 60° C—108° F—higher than at the planet's equator. As it has been said, had Earth been subject to a similar temperature pattern, Antarctica would be hotter than the Sahara Desert.

In the meantime, scientists keep hoping that the storm will yet shed light on Saturn's past, including its manner of cooling, the manner in which its interior heat manages to reach up into space, and, needless to say, the role it must have played in the evolution of the Solar System.

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<sup>1</sup> All of the following information on this Saturnian hurricane, which is now common knowledge, has been gleaned from the NASA-based report, "Cassini Sees Into the Eye of a Monster Storm on Saturn," *phys.org.com/news* (November 9, 2006); R. R. Britt, "Freak One-Eyed Monster Spotted on Saturn," *space.com* (November 9, 2006); A. Stone, "Cosmic Katrina," *Discover* (February 2007), p. 12; B. Handwerk, "Nonstop 'Hurricane' Raging on Saturn's South Pole," *nationalgeographic.com/news* (March 27, 2008); R. Russell, "Saturn's Southern Polar Vortex," *windows2universe.org* (December 26, 2010)

# Chapter 15

## Serpentine Windings

### DRAGON LORE

**D**ragon tales have been recounted since primeval times. And yet there is, and never was, such a beast. It is not that man could not have envisioned such a creature. The repertoire of his imaginary creations proves that he could.<sup>1</sup> Unlike the dragon, however, none of his fictional monstrosities ever managed to gain worldwide recognition through the ages. Together with the Christian devil, while obviously invisible, the dragon is still believed to exert its mystic powers by considerable masses in this modern age.

As with the spiral's prevalent use since Neolithic times, this fire-emitting flying creature has cried out for an account of its origin and the reason behind its worldwide lure. We could fill a multi-hundred-page volume dealing with its lore, including modern theories, which have managed to accomplish nothing beyond immersing the subject into ever deepening murky waters. Consider, as one example, a recent book on the subject. In this work, the anthropologist David Jones could best explain the nonexistent dragon as having been derived from ancient man's fear of three distinct predators—the bird of prey, the big cat, and venomous snake—which, so he believes, were eventually amalgamated into a single beast.<sup>2</sup>

Past researchers of the mytho-historical record have done much better. Among them was Grafton Elliot Smith. Despite his erroneous belief that ancient knowledge had spread around the world from Egypt by imitation through diffusion, his deep interest in mythology brought him closer to the truth. Writing at the beginning of the twentieth century, he was bold enough to claim that the dragon “evolved along with civilization itself.”<sup>3</sup> As it turns out, that much is true, as is also his assertion that an “adequate account of the development of the dragon-legend would represent the history of the expression of mankind's aspirations and fears during the past fifty centuries and more.”<sup>4</sup> He was not, however, correct in all that he maintained, such as in the following:

“The search for the elixir of life, to turn back the years from old age and confer the boon of immortality, has been the great driving force that compelled men to build up the material and the intellectual fabric of civilization. The dragon-legend is the history of that search which has been preserved by popular tradition: it has grown up and kept pace with the constant struggle to grasp the unattainable goal of men's desires; and the story has been constantly growing in complexity, as new incidents were

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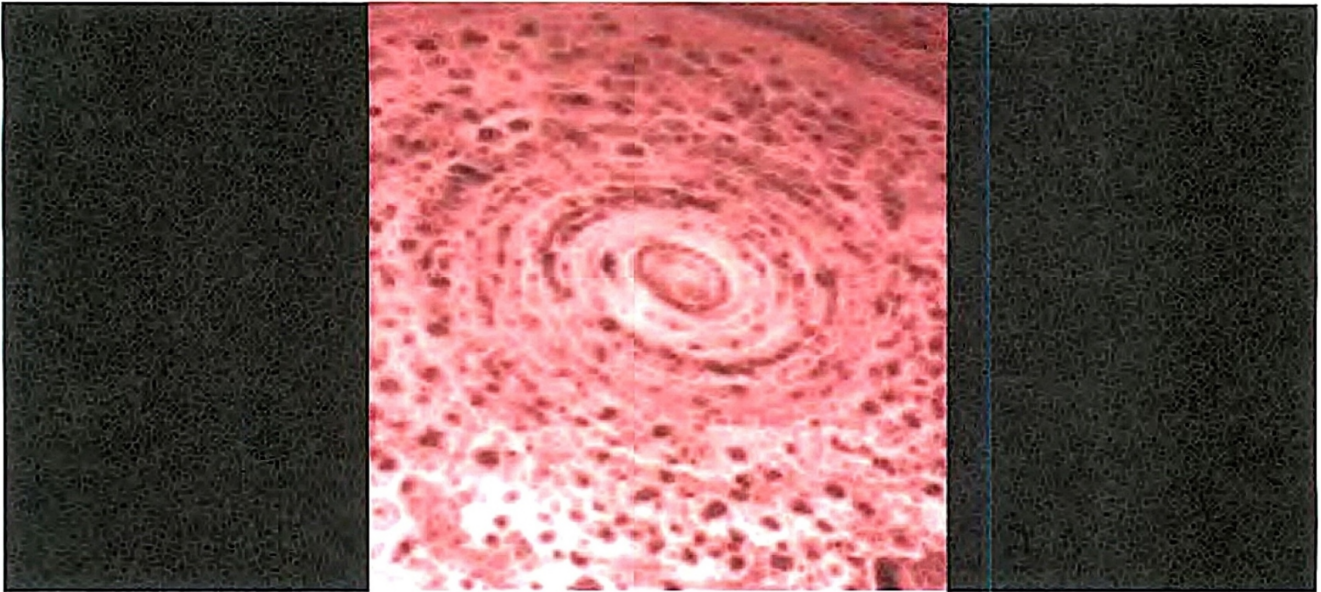
<sup>1</sup> See for instance, R. Huber, *Treasury of Fantastic and Mythological Creatures* (N. Y., 1981), *in toto*.

<sup>2</sup> D. E. Jones, *An Instinct for Dragons* (N. Y., 2000), *in toto*.

<sup>3</sup> G. Elliot Smith, *The Evolution of the Dragon* (N. Y., 1919), p. 76.

<sup>4</sup> *Ibid.*, pp. 76-77.





**Infrared image of Saturn's south polar hurricane.**  
(Composite photograph courtesy of NASA.)

drawn within its scope and confused with old incidents whose real meaning was forgotten or distorted.”<sup>1</sup>

He should not, perhaps, be blamed since he could best rely on the limited knowledge that was prevalent in his day, but the above contains two conceptual errors that should be pointed out right from the start. The first, and most important, of these false concepts is the erroneous reason he supplied for the rise of civilization. The second consists in having burdened the subject with an unfortunate fantasy that was fed by the mysticism of a much later era. The mysticism in question was derived from China and Japan where, in time, the dragon ended up being considered “a beneficent creature” that holds “all the powers that give, maintain, and prolong life and guard against all kinds of danger.”<sup>2</sup> In both those countries the dragon was regarded as “the bringer of good luck, the rejuvenator of mankind, the giver of immortality.”<sup>3</sup> In the end, that is what it all came down to.

### COMETARY PORTENTS

While there was never such a beast on Earth, the dragon's association with the sky was, as it continues to be, well known.<sup>4</sup> Elliot Smith might have overstated the case when he additionally claimed that the dragon lore represents “the earliest doctrine or systematic theory of astronomy and meteorology.”<sup>5</sup> We, however, have no qualms concerning the dragon's involvement with cosmic bodies and events.

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, p. 91.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, p. 77.

"It is an interesting fact," wrote David Talbott, "that in many different lands, the words used for this celestial monster were also used for comets."<sup>1</sup> It is true enough that, as he then added, the appearance of a comet might suggest something like a serpent or a dragon.<sup>2</sup> And, to be sure, past theorists, as he also pointed out, had long proposed that the mytho-historical dragon was really nothing but a glorious comet.<sup>3</sup> But as he then insists, and rightly so, had an actual comet been involved, it would have required one "of a vastly more spectacular sort than ever experienced in our time."<sup>4</sup>

That comets in the past were "vastly more spectacular" than the ones we see at present is indicated by early Chinese records in which comets "with tails stretching across the sky" are often mentioned.<sup>5</sup> The official history of the Chin Dynasty, known as the *Chin-Shu*, written in AD 635, lists both "small" and "larger" comets. The ones they called small were said to have measured "several inches" when viewed at arm's length, but the larger ones are again described as having extended "right across the entire heavens."<sup>6</sup> Tails "stretching across the sky" extending "right across the entire heavens" are hardly descriptive of the faint luminosities that present-day comets exhibit against our night-time sky.

This state of affairs was noted and documented by Sergiy Vsekhsviatsky in 1953.<sup>7</sup> Somewhat later, in 1995, Bruce Masse published the results of his investigation concerning the celestial events recorded in Hawaiian lore. He, too, came to similar conclusions. "A total of 207 comets," he wrote, "were distinctive because of unusual shape, brightness, color, or as was the case for most of these distinctive comets, they had tails of at least 10°, thus exceeding in length the equivalent of at least 20 apparent diameters of the full moon."<sup>8</sup> As he then added: "Some comets even had tails which stretched across the entire night sky."<sup>9</sup>

The same situation also comes to light in pre-telescopic Europe through the illustrations drawn by witnesses which depict comets with their tails sweeping across vast stretches of the sky.<sup>10</sup> What should be kept in mind is that actual photographs which show cometary tails stretching across heaven similar to these hand-drawn depictions were taken through the magnification afforded by modern telescopes. Few, if any, of these modern sightings can be said to have come close to the size or brilliance displayed by former comets and their tails.

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<sup>1</sup> D. Talbott, "Reconstructing the Saturn Myth," *AEON*, Vol. I No. 1 (January 1988), p. 23.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, p. 24.

<sup>5</sup> F. R. Stephenson, "A Revised Catalogue of Pre-Telescopic Galactic Novae and Supernovae," *The Quarterly Journal of the Royal Astronomical Society* (June 1976), p. 124.

<sup>6</sup> *Ibid.*, p. 123.

<sup>7</sup> S. K. Vsekhsviatsky, "New Works Concerning the Origin of Comets and the Theory of Eruption," *Publications of Kiev Observatory*, No. 5 (1953), p. 3. as quoted by I. Velikovsky, "Worlds in Collision in the Light of Recent Finds in Archaeology, Geology, and Astronomy," supplement to his *Earth in Upheaval* (N. Y., 1955), p. 290.

<sup>8</sup> W. B. Masse, "The Celestial Basis of Civilization," *Vistas in Astronomy*, Vol. 39 (1995), p. 466 (emphasis added).

<sup>9</sup> *Ibid.*

<sup>10</sup> N. Calder, *The Comet is Coming!* (N. Y., 1981), facing page 33; S. S. Genuth, *Comets, Popular Culture, and the Birth of Modern Cosmology* (Princeton, New Jersey, 1997), pp. 13, 108.

The much longer trains of these past celestial travelers are not the only indicators of their vaster former glory. Their brightness, too, was much more evident. One Babylonian tract from the time of Nebuchadnezzar refers to the shining of a comet "as bright as the light of day" as if such a display was a common occurrence.<sup>1</sup>

Comets have additionally been likened to insects, birds, and animals as far back as celestial records reach. The same Babylonian text mentioned above, which actually consists of a prognostication, refers to cometary tails that take on the shape of scorpions.<sup>2</sup>

"When a star shines and its brilliance is as bright as the light of day, [when] in its shining it takes a tail like a scorpion, it is a fortunate omen, not for the master of the house, but for the whole land."<sup>3</sup>

That such predictions were based on past misunderstood occurrences is here acknowledged. It would, however, have been nonsensical for astrologers to forecast them on the basis of phenomena that would never have been seen to have transpired. As clearly noted by Carl Sagan and Ann Druyan: "The confidence with which these ancient astrological pronouncements are made is striking."<sup>4</sup>

Not surprisingly, cometary tails have also been likened to the ones displayed by peacocks. Even Halley's famous comet had once presented such a tail. "Its head was round and as large as the eye of an ox, and from it issued a tail fan-shaped like that of a peacock," wrote Paolo Toscanelli of its appearance in AD 1456. "Its tail was prodigious, for it trailed through a third of the firmament."<sup>5</sup> In 1976, Comet West disintegrated into four separate pieces plus a thick blanket of dust that also spread into "a fanned, peacock-like tail."<sup>6</sup>

Comets were also likened to various monsters, a custom that was prevalent in Roman times,<sup>7</sup> but which continued into much later periods. Among such cometary creatures was that of 1182 which was described as "a twisting serpent, now writhing and coiling back upon itself," terrifying the people "with its gaping mouth, as if lusting for human blood."<sup>8</sup> Nor were serpent-like comets all that rare. Winecke's and Donati's Comets, both of which appeared in 1858, as well as those named for Holmes and Swift, which showed up in 1892, were also said to look like fiery flying serpents. Biela's Comet, which eventually split in two and later disintegrated altogether, was likewise described as having looked like a great red serpent.<sup>9</sup> Fiery and writhing celestial serpents are not much different from fire-emitting serpentine dragons flying through the sky. And that comets were said to resemble dragons has been documented

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<sup>1</sup> C. Sagan & A. Druyan, *Comet* (N. Y., 1986), p. 20.

<sup>2</sup> M. Jastrow, *The Religion of Babylonia and Assyria* (Boston, 1898), pp. 689-690.

<sup>3</sup> C. Sagan & A. Druyan, *loc. cit.*

<sup>4</sup> *Ibid.*

<sup>5</sup> N. Calder, *op. cit.*, p. 21.

<sup>6</sup> *Ibid.*, pp. 67, 73.

<sup>7</sup> Lucan, *Bellum Civile* (sometimes referred to as *Pharsalia*) 2:1-4.

<sup>8</sup> L. Rudaux & G. de Vaucouleurs, *Larousse Encyclopedia of Astronomy* (London, 1959), p. 241.

<sup>9</sup> G. Campbell, "The Great Flying Serpent," *The Vancouver Sun* (November 20, 1973).



Aztec depiction of cometary dragon.

from the twelfth century AD down into modern times.<sup>1</sup>

There is, however, one very important matter to keep in mind. As we have seen, some comets, or their trains, were said to *look like* peacock tails or scorpions, while certain others were just as clearly said to *have assumed* the form of dragons. In other words, they were not themselves believed to have been serpents flying through the sky. Despite the fact that ancient comets were more spectacular than present ones, the dragon that these comets were said to look like must have been much more impressive. What could it then have been?

### SNAKY COILS

Together with various other phenomena, the mytho-historical dragon developed from man's early tendency to endow celestial prodigies with human and/or animals traits in an endeavor to understand what was really going on in heaven above. In this particular instance, one could actually claim that the dragon originated from the very spiral we discussed in our previous chapter. In fact, the spiral is found associated with the serpent or snake motif from as early as the civilization of Çatal Hüyük.<sup>2</sup> As we have already noted, even Vishnu was sometimes portrayed as a serpent coiled into a spiral,<sup>3</sup> while the Australian Aborigines continue to represent the spiral of Creation as a coiling serpent down into modern times.<sup>4</sup> Known as the rainbow serpent, its Aboriginal origin actually traces back to great antiquity and is found de-

<sup>1</sup> Geoffrey of Monmouth, *Historia Regum Britanniae*, viii:14; C. Beaumont, *The Mysterious Comet* (London, 1932), pp. 82-83.

<sup>2</sup> M. Gimbutas, "The Temples of Old Europe," *Archaeology* (November/December 1980), pp. 44-45, 48.

<sup>3</sup> D. Talbott, "Past History of the Planets: The Polar Configuration (Past and Present Research)," *Chronology & Catastrophism Review* (2008), p. 82.

<sup>4</sup> W. Caruana, *Windows on the Dreaming* (Canberra, 1989), pp. 63, 67.



picted in rock art that has been dated to 6000 years ago.<sup>1</sup> One that came to light in the Kakadu National Park shows it spiraling around a central orb.<sup>2</sup> It was not, however, only serpents, but dragons, too, were just as often represented as being coiled,<sup>3</sup> as notably portrayed by the Japanese *p'an-lung*.<sup>4</sup> What this more than intimates is that it was the spiraling matter spewing from proto-Saturn's south pole that ended up being envisioned by some observers as a fire-breathing serpent.

The association of the dragon with Saturn left its mark in curious ways in various parts of the ancient world. Some of these marks remain evident to this day. One that is worthy of mention is the Burmese tradition of linking various animals with the days of the week. Most of these animals comprise the ones that are common to that country. Saturday, or Saturn's Day, however, has been linked in this tradition to the dragon.<sup>5</sup> And very much like the spiral and coiled serpent, the dragon, too, was associated with Creation.

That the Australian Aboriginal rainbow serpent is shown to be coiled around a central orb indicates that the matter spiraling out of proto-Saturn's southern pole continued to expand until it was actually seen to surround the spewing globe. This is lent credibility by similar depictions from the Far East.

There is one thing, however, that needs stressing at this point. Just as there was more than one spiraling phenomenon associated with this event, so will it be discovered that there had also been more than one dragon. We must, however, keep events in their chronological order so that, for the time being, we must also restrict our discussion to just one dragon.

## FEATHERY SNAKES

As we all know, snakes are covered with scales, so it does not surprise anyone that so, also, have dragons been depicted through the ages. According to Mexican traditions, however, the Creator appeared in the form of a serpent that was covered with feathers.<sup>6</sup> And, to be sure, quite a few of these flying serpents were described as having been feathered. Prime among them is the Mayan Kukulcan, simply known as the Plumed Serpent,<sup>7</sup> whose plumage was fashioned after the shimmering green tail feathers of the quetzal bird from which the serpent's Aztec name, Quetzalcoatl, is derived. So, similarly, was the same entity known as the Great Plumed Serpent among the Hopi Indians farther north.<sup>8</sup> While some might consider feathered serpents as somewhat peculiar, others might argue that since birds are feathered, why should

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<sup>1</sup> C. Jones, "Rock Serpent May Predate All Religions," *Canberra Times* (October 30, 1996).

<sup>2</sup> *Ibid.*

<sup>3</sup> See, for instance, the illustrations reproduced by M. Noble, *Dragons* (N. Y., 2002), pp. 18, 26-27.

<sup>4</sup> M. Oldfield Howie, *The Encircled Serpent* (N. Y., 1955), p. 258.

<sup>5</sup> "Burma on the Bay of Bengal," *Lands and Peoples*, Vol. IV: "Southern Asia and the Far East" (Toronto, 1956), p. 156.

<sup>6</sup> M. Oldfield Howie, *op. cit.*, p. 300.

<sup>7</sup> This is common knowledge, but see especially, T. Lowenstein, "Raising the Sky," *Gods of Sun and Sacrifice: Aztec & Maya Myth* (London, 1997), pp. 74 ff.; N. Baldwin, *Legends of the Plumed Serpent* (N. Y., 1998), *in toto*.

<sup>8</sup> D. A. Leeming, *The World of Myth* (N. Y., 1990), p. 37.



Chinese coiled dragon.  
(Illustration by Marty Noble.)

not flying serpents be similarly endowed? There might, however, be something somewhat different to consider.

Basing his reconstruction on the effects displayed by plasma morphology, David Talbott came to the realization that the spiral of Creation would have exhibited radial spikes or streamers,<sup>1</sup> which some would have interpreted as hair or a coat of feathers.<sup>2</sup> Despite the slight differences between his version of the events and the one we have been delineating, he is correct in this respect. Back in the sixteenth century, Bernardino de Sahagun, the Spanish monk sent to Christianize the Aztecs, had already come to realize that the feathery coat of Quetzalcoatl represented flames of fire.<sup>3</sup> This accords with the Aztec belief that the divine weapon known as *xiuhcoatl*, which translates as “turquoise serpent,” constituted “fire and light.”<sup>4</sup>

<sup>1</sup> D. Talbott, *loc. cit.*

<sup>2</sup> *Ibid.*, p. 76.

<sup>3</sup> B. de Sahagun, *Historia general de las cosas de Nueva España*, as translated by F. R. Bandelier, *A History of Ancient Mexico*, Vol. I (1932), p. 26.

<sup>4</sup> W. Krickeberg, *Pre-Columbian American Religions* (1968), p. 44.



Coiled dragon—from China.  
(Illustration by Marty Noble.)

## LEVIATHAN

There are two mysterious creatures mentioned in the Old Testament book of *Job*. One of them is Behemoth,<sup>1</sup> the other is Leviathan.<sup>2</sup> Although there have been those who have understood Behemoth as a hippopotamus, and Leviathan as a crocodile,<sup>3</sup> most Biblical versions leave these creatures unidentified. Needless to say, this has led to various theories concerning the identity of these beasts. It has, for instance, been reported that guides who conduct what have been referred to as “Biblically Correct Tours” through the Museum of Nature & Science, in Denver, Colorado, identify Leviathan and Behemoth as a brontosaurus and a plesiosaur respectively, two dinosaurs that were said to have existed together with ancient man, only to suffer extinction during Noah’s flood.<sup>4</sup>

<sup>1</sup> Job 40:15.

<sup>2</sup> Job 41:1.

<sup>3</sup> W. B. Ward, *Out of the Whirlwind* (Richmond, Virginia, 1958), p. 103.

<sup>4</sup> L. J. Greenspoon, “The Bible in the News,” *Biblical Archaeology Review* (March/April 2006), p. 20.

The identification of Behemoth as a dinosaur, but not specifically as a brontosaurus, had earlier been offered by Immanuel Velikovsky.<sup>1</sup> So, also, with two other strange creatures that pop up in Jewish legends, the Ziz and the Re'em.<sup>2</sup> But because, again in Jewish legends, Leviathan is said to have spouted water,<sup>3</sup> Velikovsky "guessed" it to have been nothing but a whale.<sup>4</sup> He seems to have forgotten that Leviathan was said to have possessed more than one head,<sup>5</sup> which whales, needless to say, do not.

Even so, although he did not contest the ancient period to which they have been allotted, Velikovsky did not only believe that dinosaurs continued to thrive well into "the age of man," but even into "the historical part of this age."<sup>6</sup> Very much like the "Biblically Correct Tours" mentioned above, he was of the opinion that most dinosaurs succumbed to Noah's Flood, but, still according to him, a "few specimens" did survive only to fall victim to "one or more of the later cataclysms."<sup>7</sup> Others, however, claim that, while these "dinosaurs" were described to Job by God himself, they did not exist in Adam's time.<sup>8</sup>

The above delusions, for they are nothing but, stem from the nature assigned to these bizarre creatures, such as spouting water, using tails and fins in their defense against each other, together with what they fed on, plus various other traits, as described in a diversity of Jewish legends and extra-Biblical literature.<sup>9</sup> These traits, in turn, were fed by the befuddled views sustained by later fundamentalists who failed to understand what their ancestors had been alluding to for untold generations. This became especially so when the celestial stability of later eras eradicated all that the ancients had described. There was nothing left in heaven that bore the slightest resemblance to those bizarre celestial creatures that had terrified all those who had witnessed their unfolding and their tumultuous sway.

Older sources about these creatures which were mentioned by later writers are no longer in existence,<sup>10</sup> but while what remains extant is laden with injudicious revelation, "a good deal of old mythological material," as Louis Ginzberg tells us, can still be found "preserved in them."<sup>11</sup>

It is therefore noted that what is told about these creatures in extant sources can be ambiguous at best. Clues that point to their correct identification, however, are not exactly lacking. So let us first take note of what these beasts were not.

Leviathan, as W. G. Lambert rightly tells his readers, "is not a great fish, but a snake."<sup>12</sup> This is clearly delineated in the Old Testament where Leviathan is presented as a "piercing"

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<sup>1</sup> I. Velikovsky, "Were All Dinosaurs Reptiles?" *KRONOS* II:2 (November 1976), p. 96.

<sup>2</sup> *Ibid.*

<sup>3</sup> L. Ginzberg, *The Legends of the Jews*, Vol. I (Philadelphia, 1968), p. 5.

<sup>4</sup> I. Velikovsky, *loc. cit.*

<sup>5</sup> Psalms 74:14.

<sup>6</sup> I. Velikovsky, *op. cit.*, p. 95.

<sup>7</sup> *Ibid.*

<sup>8</sup> D. A. Deal, *The Day Behemoth & Leviathan Died* (Winnewood, Oklahoma, 1999), *in toto*.

<sup>9</sup> Those interested can check the pertinent subjects in the Index to L. Ginzberg, *op. cit.*, Vol. VII.

<sup>10</sup> See *ibid.* Vol. V, p. 43.

<sup>11</sup> *Ibid.*, p. 46.

<sup>12</sup> H. Shanks, "Festschrift for Moussaieff," *Biblical Archaeology Review* (November/December 2003), p. p. 26.





**Dragon coiled around central orb.**  
(From an old Chinese print.)

and “crooked serpent.”<sup>1</sup> In fact, the creature’s very name, which in Hebrew is more correctly rendered as *livyathan*,<sup>2</sup> is derived from *liviah* which means “coiled,” “entwined,” and/or “serpentine.”<sup>3</sup>

What is strange is that, despite his insinuation that Leviathan was a whale, Velikovsky not only knew that this Biblical creature had been serpentine in form, but also that it stood to illustrate a cosmic spectacle. In fact, in an entirely different work, the one for which he finally became famous, he proposed that Leviathan had actually been the former cometary aspect of the planet Venus during the time of the Israelite exodus from Egypt.<sup>4</sup>

<sup>1</sup> Isaiah 27:1

<sup>2</sup> J. Strong, *Dictionary of the Hebrew Bible* (Madison, N.J., 1890), p. 59.

<sup>3</sup> O. ben M. Feldman, *The Passover Marvels* (Philadelphia, 1978), p. 29.

<sup>4</sup> I. Velikovsky, *Worlds in Collision* (N. Y., 1952), p. 80.

While Velikovsky's identity of Leviathan as cometary Venus was considered by some,<sup>1</sup> others have presented the celestial creature as the planet Mars.<sup>2</sup> Much earlier, the Ophites, a Gnostic sect from Syria and Egypt who were also known as Serpentinians, had even presented Leviathan as the very "soul of the universe."<sup>3</sup> It should hardly be stressed that none of this is in keeping with the concepts we have been discussing in the present work.

That Leviathan was the Semitic form of our friend, the dragon, is intimated by his description as a fire-breathing serpent.

"Out of his mouth go burning lamps, and sparks of fire leap out. Out of his nostrils goeth smoke...His breath kindleth coals, and a flame goeth out of his mouth."<sup>4</sup>

As he moves, it was written, he "maketh a path to shine after him,"<sup>5</sup> which shining path is understood as the resplendent trail proto-Saturn's uncoiling debris left in its wake. To be sure, Leviathan's fins were said to "radiate brilliant light,"<sup>6</sup> while elsewhere it is said that his entire skin possessed "a shining luster."<sup>7</sup>

It can therefore be said that William Ward came very close to the truth when he described Leviathan and Behemoth as "two symbolic creatures which played a most significant role in ancient mythology."<sup>8</sup> As he went on: "The great sea monster," that is Leviathan, "was a symbol of the primeval chaos God had to conquer to bring creation under control."<sup>9</sup> To which he correctly added that this story "is often referred to in ancient apocalyptic literature and occasionally in the Old Testament."<sup>10</sup>

Or as Isaac Asimov expressed it:

"In many mythologies, the supreme god...creates the universe out of the remnants of that monster. This can be taken as symbolizing the victory of order over disorder, of cosmos over chaos."<sup>11</sup>

One amendment to both Ward's and Asimov's disclosures is that, while these creatures did end up being symbolic, they actually owed their origin to *visible* celestial phenomena.

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<sup>1</sup> See here, for instance, M. Sieff, "The Dragon in Myth and Folklore," *Society for Interdisciplinary Studies Workshop*, Vol. 3, No. 4 (April 1981), p. 6.

<sup>2</sup> D. W. Patten, et al., *The Long Day of Joshua and Six Other Catastrophes* (Seattle, 1973), p. 207; D. W. Patten, *Catastrophism and the Old Testament* (Seattle, 1988), pp. 84, 93.

<sup>3</sup> Origen, *Contra Celsum*, 6:25.

<sup>4</sup> Job 41:19-21.

<sup>5</sup> Job 41: 32.

<sup>6</sup> L. Ginzberg, *op. cit.*, Vol. I, p. 27.

<sup>7</sup> *Ibid.*, Vol. V, p. 103.

<sup>8</sup> W. B. Ward, *loc. cit.*

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*

<sup>11</sup> I. Asimov, *Asimov's Guide to the Bible*, Volume One: *The Old Testament* (N. Y. 1971), p. 486.

In the end, just as with the cosmic serpents of other ancient nations, Leviathan ended up representing “the forces of evil in the world,”<sup>1</sup> which forces have to be subjugated, just as the monster had been during Creation. Nahum Sarna contested this opinion, stressing his belief that the serpent, even Leviathan, is not mythologically represented as “a demoniacal being.”<sup>2</sup> The serpent is not, according to him, “described as evil.”<sup>3</sup> That, however, is contrary to what is claimed in Jewish kabbalistic literature in which Leviathan is definitely so described.<sup>4</sup>

Of Behemoth, we shall be speaking in a while.

### SERPENT WORSHIP

The evil attached to the serpent was not restricted to Jewish belief. Snakes were considered just as evil in ancient Egypt. Because of the venom contained in the fangs of some of them, it might be thought that this is understandable. But even in death, or one should say following it, snakes continued to be feared. The text inscribed in the pyramid of Unas contains a long section that includes various incantations the recital of which “was intended to protect the deceased from various kinds of snakes and worms.”<sup>5</sup> These texts, as Wallis Budge informs us, “are exceedingly ancient” and “may safely be said to form one of the oldest parts of the funeral literature of the Egyptians.”<sup>6</sup> Nor can it be said that such beliefs died out with the passage of time. As Budge continues to tell us, “we find from the later editions of the Book of the Dead and certain Coptic works that the dread of the serpent as the emblem of physical and moral evil existed among the Egyptians in all generations.”<sup>7</sup>

As Budge additionally informs his readers, “a limbo filled with snakes” continued to sway the minds of Copts “long after they had been converted to Christianity.”<sup>8</sup> But why should it have been otherwise? Fed by the popular Old Testament myth that tells of the serpent’s temptation of Adam and Eve, the fear of the serpent as an embodiment of evil became part and parcel of Christian faith from the very beginning as it continues to be upheld by Christian Churches up to the present. Is not the serpent, in fact, the very emblem of the Christian devil?<sup>9</sup>

What *might* be considered strange by some is that, among some early Christians, the serpent was regarded as the personification of goodness. The members of one particular sect even became known as Ophites—whom we have already met—which name derives from *ophis*, the Greek word for “snake.” To this “Brotherhood of the Serpent,” as some continue to refer to this particular group,<sup>10</sup> also known as Serpentinians,<sup>11</sup> the snake was the very symbol

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<sup>1</sup> *Ibid.*

<sup>2</sup> N. M. Sarna, *Understanding Genesis* (N. Y., 1976), p. 26.

<sup>3</sup> *Ibid.*

<sup>4</sup> L. Ginzberg, *op. cit.*, Vol. V, pp. 42, 46, 311-312.

<sup>5</sup> E. A. W. Budge, *The Egyptian Book of the Dead* (N. Y., 1895/1967), p. cxxix.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> While widely known, see here M. Oldfield Howie, *op. cit.*, p. 224

<sup>10</sup> *Ibid.*

<sup>11</sup> Origen, *loc. cit.*

chosen to represent God's *logos*,<sup>1</sup> and even God himself.<sup>2</sup>

In a way this idea was not much different from the one forwarded by Zarathustra in relation to Ahura Mazda in which the devil and God had also originated as one and the same entity. Nor has this idea fallen by the wayside. The Kurdish tribe of the Yezidis actually worship Shaitan, that is Satan, as a god.<sup>3</sup> In Hinduism, the word *deva* stands for "God," but in Persian the same word means "fiend" or "devil."<sup>4</sup> As Oldfield Howie tells us, *devel* continues to be the Gypsy name for God.<sup>5</sup>

It is therefore not surprising that, as much as it was feared, the snake was worshipped both in ancient civilizations as well as among more modern tribes.<sup>6</sup> It certainly remained rampant in India.<sup>7</sup> One of the ruling dynasties that held sway in the Mandi State adopted the serpent as the "supreme object of worship."<sup>8</sup> Serpent worship has in fact remained common among the natives of this State,<sup>9</sup> where the "religion of the majority" has been described as "a sort of demon worship."<sup>10</sup> And yet, as "palpably predominant" as serpent worship in this area has been described, people do not hesitate to kill snakes.<sup>11</sup>

Just like the ancient Ophites, there also was, perhaps still is, a so-called Snake-tribe in the Punjab who worship living snakes especially during a nine-day festival in September.<sup>12</sup> The veneration of snakes in India is additionally prominent in the Dravidian areas, as likewise in Bengal, where, in keeping with tradition, some families continue to keep snakes, which they regularly feed, in their home gardens.<sup>13</sup>

For a while, snake worship also continued to be performed in ancient Europe, especially among the Prussians.<sup>14</sup>

There are those who claim that the snake cult originated in dynastic Egypt from where it is said to have spread both east and west, through India, the Far East, across the Pacific Islands, and even into America.<sup>15</sup> But this, again, relies on the sort of diffusion that we cannot accept. That snakes received special attention among the natives of North America, as indicated

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<sup>1</sup> T. W. Doane, *Bible Myths and their Parallels in Other Religions* (N. Y., 1882), p. 490.

<sup>2</sup> M. Oldfield Howie, *loc. cit.*

<sup>3</sup> M. R. Izady, *The Kurds—A Concise Handbook* (London, 1992) and A. Collins, *From the Ashes of Angels: The Forbidden Legacy of a Fallen Race* (London, 1996) as cited by D. M. Rohl, *Legend: The Genesis of Civilization* (London, 1998), p. 150.

<sup>4</sup> Although this is widely known, see G. Rawlinson, *The Seven Great Monarchies of the Ancient Eastern World*, Vol. II (N. Y., 1884), p. 50.

<sup>5</sup> M. Oldfield Howie, *op. cit.*, p. 225.

<sup>6</sup> E. A. W. Budge, *Osiris & the Egyptian Resurrection*, Vol. II (N. Y., 1911/1973), pp. 236-238.

<sup>7</sup> A. Verghese, *Archaeology, Art and Religion: New Perspectives on Vijayanagara* (New Delhi, 2001), p. 6.

<sup>8</sup> B. L. Kapoor, *Gods of the High Hills* (New Delhi, 2001), p. 19.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*, p. 62.

<sup>11</sup> *Ibid.*

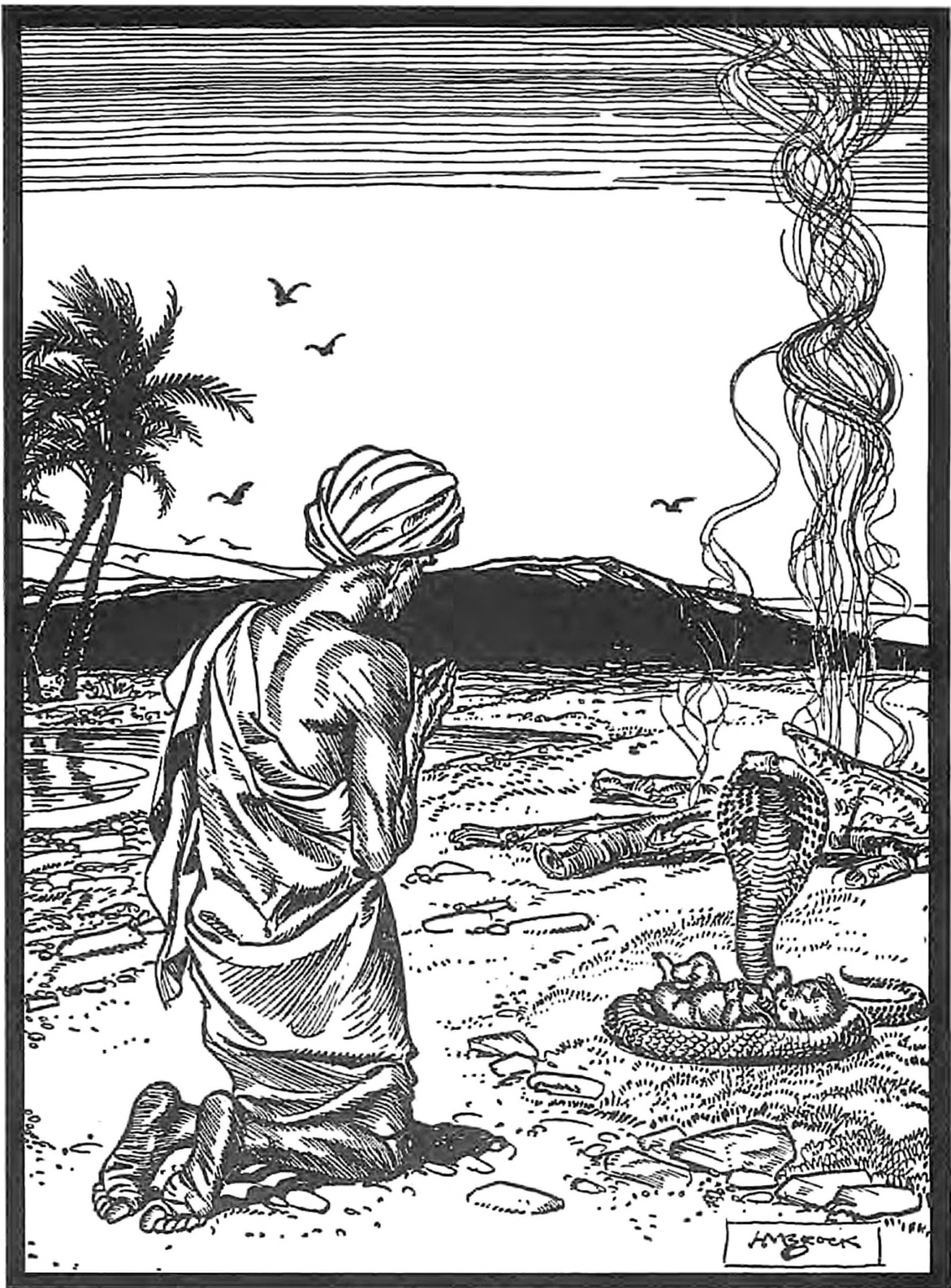
<sup>12</sup> J. G. Frazer, *The Golden Bough*, Vol. II (N. Y. 1890/1981), pp. 139-140

<sup>13</sup> A. F. Sjoberg, "The Dravidian Contribution to the Development of Indian Civilization: A Call for a Reassessment," *Comparative Civilizations Review* (Fall 1990), p. 66.

<sup>14</sup> J. G. Frazer, *op. cit.*, p. 283.

<sup>15</sup> H. Yoshino, "The Snake Cult in Japan," in Y. Yasuda (Ed), *Forest and Civilizations* (New Delhi, 2001), p. 85.





Serpent worship in India.

among diverse tribal units,<sup>1</sup> is quite well known. It would, however, be foolhardy to continue to assume that this derived from ancient Egypt.

Among the Moquis of Arizona, now known better as the Hopi, who originally came from Colorado, there developed a secret society that, much like the ancient Ophites, has been called a Serpent Brotherhood. Wearing distinctive costumes, members of this society undergo a special ritual during which they march around a sacred stone in a prescribed area while chanting to the sound of rattles. The head priest and his acolytes, carrying live snakes in their hands and mouths, follow in a procession toward the sacred rock, after which there ensues a frenzied dance during which the snakes are liberated.<sup>2</sup> Similar dances are also known to have taken place among the Zuni.<sup>3</sup>

Serpent worship also flourished in South America, especially around the Copacabana area in Peru. Back in 1619, a Spanish priest found it obligatory to destroy a snake idol made of stone on a mountaintop near the town of Yunguyo. Called Copocati, it was described as “an extremely ugly figure and all wound up with serpents.” There were also live snakes around the idol, which the priest killed and threw into a lake.<sup>4</sup>

The veneration of snakes in and around Peru, however, goes much farther into antiquity than the Spanish Conquest. To be sure, the “most frequently carved animals” on ancient Peruvian stelae are snakes. Such stelae have been discovered all around Lake Titicaca and have been dated to pre-Inca times.<sup>5</sup>

Way before that, Nehushtan (or Nechushtan), which is the Hebrew word for “snake,” was worshipped by the Israelites in Solomon’s very temple. They adored it and burned incense to it down to the time of King Hezekiah who destroyed it during his religious reform.<sup>6</sup> As Bronson Feldman has indicated, snake images might even have been kept by the earlier King David among the *terafim*—i.e., idols—treasured in his home.<sup>7</sup>

There have been some,<sup>8</sup> especially among Catholics,<sup>9</sup> who have tried to play this Israelite custom down.<sup>10</sup> This is not all that surprising since the very compilers of the Old Testament were themselves guilty of such procedures. “The Bible continually gives us glimpses of a state of affairs which presumably was quite different from what it appears to have been at first glance,” Werner Keller correctly pointed out. “For example, the authentic people’s religion of the ‘children of Israel’ as it was actually practiced over wide areas must have been very

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<sup>1</sup> See here especially M. Oldfield Howie, *op. cit.*, pp. 288-290

<sup>2</sup> *Ibid.*, p. 290.

<sup>3</sup> *Ibid.*

<sup>4</sup> P. Tierney, *The Highest Altar: The Story of Human Sacrifice* (N. Y., 1989), p. 222.

<sup>5</sup> *Ibid.*

<sup>6</sup> 2 Kings, 18: 4. (NOTE: This appears as 4 Kings, 18; 4 in the Catholic Douay version.)

<sup>7</sup> O. ben Mosheh Feldman, *The Passover Marvels* (Philadelphia, 1978), p. 30.

<sup>8</sup> See here, for instance, H. Shanks, “The Mystery of the Nechushtan,” *Biblical Archaeology Review* (March/April 2007), pp. 57-63.

<sup>9</sup> K. Swanson, “A Reassessment of Hezekiah’s Reform in Light of Jar Handles and Iconographic Evidence,” *Catholic Biblical Quarterly*, 64 (2002), p. 460, as cited in *ibid.*, p. 60.

<sup>10</sup> See also Y. Rapoport, H. Shank, & B. Kelley, “Slippery Nechushtan,” *Biblical Archaeology Review* (July/August, 2007), pp. 8, 9.



**Hopi snake dance.**  
(Illustration by Peter F. Copeland.)

different from what the authors of the Biblical writings would have liked to see.”<sup>1</sup>

As a word of caution, it must be stressed that, much like the dragon lore to which it was related, the adoration of serpents must not always be seen as having reflected the debris that spiraled out from proto-Saturn’s southern pole. That the spiral symbolized what some have called “the universal snake” is now recognized by archaeologists, even though the reason behind it is not always understood.<sup>2</sup> But while we must keep events in their proper chronological sequence, it should also be noted right here that proto-Saturn was yet to sire further spiral offspring.

## APEP

It has been claimed that the Israelites borrowed the concept of Leviathan from the Canaanite Lotan,<sup>3</sup> the seven-headed serpent of Ugaritic mythology.<sup>4</sup> It is amazing how often it is forgotten that mythological themes are universal. Besides, Leviathan was not the same as Lotan. The mytho-historical record is chockfull of serpentine entities, but, as pointed out above, not all of them represented the same prodigy. Serpents in Egyptian lore, according to Rundle Clark, have a tendency to “merge into one another.”<sup>5</sup> In actual fact, however, so do the mythological serpents of other ancient nations.

One of the most villainous serpents in ancient Egypt was Apep, also rendered as Apepi, whom the later Greeks referred to as Apopis or Apophis. One must beware what one reads about this creature in both ancient and modern texts since his iniquitous character lent him an even greater tendency for amalgamation with other serpentine entities. To be sure, the *Papyrus of Nesi-Amsu* lists an additional twenty-nine names for this being,<sup>6</sup> but we shall not here concern ourselves with them.

Wallis Budge confused the matter further with his stated opinion that Apep owed his origin to a species of giant snakes that overran Egypt’s wilderness in primeval times.<sup>7</sup> He supported this contention through the actual remains of a thirty-foot-long serpent that had earlier been discovered in Egypt’s Fayum district.<sup>8</sup>

And yet, on a subsequent page of the very same work, he then negates it all by informing his readers that the Apep myth is reflected in almost every detail by the Assyrian one involving Tiamat, which he claims to be “undoubtedly of Sumerian origin.”<sup>9</sup> As he then adds: “It is probable that both the Egyptians and the Sumerians derived their versions from a common

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<sup>1</sup> W. Keller, *The Bible as History* (N. Y., 1981), p. 267.

<sup>2</sup> See, for instance, R. Rudgley, *The Lost Civilizations of the Stone Age* (N. Y., 2000), p. 73.

<sup>3</sup> A. Caquot, “Western Semitic Lands: The Idea of the Supreme God,” *Larousse World Mythology* (London, 1972), p. 93.

<sup>4</sup> *Ibid.*, p. 90. where “Lotan” is misprinted as “Loran.”

<sup>5</sup> R. T. Rundle Clark, *Myth and Symbol in Ancient Egypt* (London, 1978), p. 239.

<sup>6</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. I (N. Y., 1904/1969), p. 326.

<sup>7</sup> *Ibid.*, pp. 11, 61.

<sup>8</sup> C. W. Andrews, “Preliminary Notes on Some Recently Discovered Extinct Vertebrates from Egypt (Part II),” *Geological Magazine* (October 1901), p. 438.

<sup>9</sup> E. A. W. Budge, *op. cit.*, p. 327.



source.”<sup>1</sup> Unknown to him, the source of derivation that had been common, not only to Sumerians and Egyptians, but to all who had lived through it, was the protracted sequence of events that followed the proto-Saturnian flare-up of our discussion.

It was said that Apep was given birth just after Ra himself was born,<sup>2</sup> which to us means that he came into being right after proto-Saturn’s flaring activation. Not only did he, however, come into being, as we have seen he also spread across the proto-Saturnian deity’s face, an action that was visualized by some as an assault on Ra. Although the actual myth of this attack has not survived, it is often referred to by the very Egyptians who thought of Apep as Ra’s arch-enemy,<sup>3</sup> reviling him as “the serpent-devil,”<sup>4</sup> the very “embodiment” of “chaos and evil.”<sup>5</sup>

Unfortunately, because certain hieroglyphic words of ambiguous meaning have been mistranslated as “rising” and “setting,”<sup>6</sup> Ra was eventually robbed of his primeval immobility.<sup>7</sup> This state of affairs resulted in the interpretation of Apep’s assault on Ra as a series of attacks, day and night, on the present Sun,<sup>8</sup> especially during eclipses.<sup>9</sup> This led to various rites, especially at the Karnak temple of Amen-Ra, in ancient Thebes, which were aimed at assisting Ra in his struggles against Apep.<sup>10</sup> As with the dragon of other nations, Apep has thus been turned into the Sun’s “eternal enemy”<sup>11</sup> despite the fact that no serpentine entity is ever seen to continually harass our present celestial source of light.

## THE SERPENT OF ETERNITY

Not everyone in the ancient world saw the serpent’s coils unwinding across the face of proto-Saturn as an attack. There were some who saw in him a means of conveyance upon which proto-Saturn rode. In Hindu lore, the cosmic serpent of our concern was known as Ananta, which Sanskrit name is translatable into English as “endless”<sup>12</sup> or “infinite,”<sup>13</sup> but also as “eternity”<sup>14</sup> for which the serpent eventually became known.<sup>15</sup> Also known as Sesha or

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<sup>1</sup> *Ibid.*

<sup>2</sup> F. Fleming, “The Divine Creators,” in H. Cleary & R. Petrie (Eds.), *The Way to Eternity* (London, 1997), p. 33.

<sup>3</sup> D. A. Mackenzie, *Egyptian Myth and Legend* (N. Y., 1907/1978), pp. 12, 159.

<sup>4</sup> E. A. W. Budge, *op. cit.*, p. 11.

<sup>5</sup> F. Fleming, *loc. cit.*

<sup>6</sup> See *God Star*, pp. 214-215 for sources and examples.

<sup>7</sup> See *ibid.*, p. 214.

<sup>8</sup> E. A. W. Budge, *op. cit.*, pp. 11, 269 ff., 324-325; R. T. Rundle Clark, *op. cit.*, pp. 209 ff.

<sup>9</sup> F. Fleming, *op. cit.*, p. 39

<sup>10</sup> E. A. W. Budge, *op. cit.*, pp. 270, 325-326; *idem*, *Osiris and the Egyptian Resurrection*, Vol. II (N. Y., 1911/1973), p. 203; F. Fleming, *op. cit.*, pp. 39, 41

<sup>11</sup> J. Viaud, *loc. cit.*

<sup>12</sup> H. Zimmer, *Myths and Symbols in Indian Art and Civilization* (Princeton, 1974), pp. 37, 62.

<sup>13</sup> W. D. O’Flaherty, *Hindu Myths* (Harmondsworth, 1976), p. 340.

<sup>14</sup> J. Herbert, “Hindu Mythology,” in “India: The Eternal Cycle,” *Larousse World Mythology* (London, 1972), p. 209.

<sup>15</sup> W. D. O’Flaherty, *op. cit.*, pp. 153, 221.

Shesha, which name means “residue” or “remainder,”<sup>1</sup> Ananta was described as having been a “coiled serpent”<sup>2</sup> on which Vishnu was later to lie while floating on the cosmic sea.<sup>3</sup> Because later artists found it difficult to portray the god lying on a coiled serpent, or perhaps because by then the actual event had become somewhat obscured, Sesha is usually pictured stretched out horizontally beneath Vishnu. The serpent’s acquisition of seven heads,<sup>4</sup> which formed the basis of so many later portrayals, must however await an explanation in a following volume.

Ananta is not the only cosmic entity that became known as the Serpent of Eternity. The Fon of what used to be Dahomey, now Benin, in West Africa, insist that the serpent was created first, even though it was itself responsible for Creation. Its enfolding coils, it is said, are not static, but revolve around what is now believed to be the Earth. It is also said to help in setting the heavenly bodies into motion.<sup>5</sup>

As can be seen, despite the confused concepts that now burden these beliefs, the Fon continue to associate serpents with cosmogonic lore. Very much like the Hindus, they are also of the opinion that, while originally finding only stagnant waters, by which we understand the cosmic ocean, the snake ended up carrying the Creator on its back.<sup>6</sup>

The Fonian serpent is not the only snake that has been held responsible for Creation. The Fijian Ngendei, who is half snake,<sup>7</sup> is also believed to have created what ended up being described as the world.<sup>8</sup>

## SERPENTINE DEITIES

The Chinese were not that different. As with other ancient nations, dragons were not only believed to be immortal, they were also thought of as divine beings.<sup>9</sup> In fact, among some, they still are. This does not square well with most works on mythology in which cultic snakes and dragons are explained through analogy with their present terrestrial cousins or the atmospheric behaviour they are often burdened with.<sup>10</sup> As Jack Tresidder pointed out, such correlations “do not explain the almost universal importance of the serpent in mythology.”<sup>11</sup> Nor did it escape his notice that such serpents symbolized “divinity itself” in the role of Creator.<sup>12</sup> This was a concept that was common to the most sophisticated civilizations in the ancient world, as it remains among the most primitive ones down to the present. Up until the advent

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<sup>1</sup> H. Zimmer, *loc. cit.*

<sup>2</sup> *Ibid.*, p. 61; V. Ions, *Indian Mythology* (London, 1967), p. 46

<sup>3</sup> *Ibid.*; J. Herbert, *loc. cit.*; P. masson-Oursel & L. Morin, “Indian Mythology,” *New Larousse Encyclopedia of Mythology* (London, 1972), pp. 340, 362; W. D. O’Flaherty, *op. cit.*, p. 221; H. Zimmer, *op. cit.*, pp. 37, 61.

<sup>4</sup> P. masson-Oursel & L. Morin, *loc. cit.*

<sup>5</sup> G. Parrinder, *African Mythology* (London, 1967), p. 22.

<sup>6</sup> *Ibid.*

<sup>7</sup> G. H. Luquet, “Oceanic Mythology,” *New Larousse Encyclopedia of Mythology* (London, 1972), p. 450.

<sup>8</sup> *Ibid.*, p. 449.

<sup>9</sup> M. Oldfield Howie, *op. cit.*, p. 264.

<sup>10</sup> *Ibid.*; J. K. Hord, “The Twilight of the Goddess: An Ancient Religious Revolution,” *Comparative Civilizations Review* (Fall 1987), p. 79.

<sup>11</sup> J. Tresidder, *Dictionary of Symbols: An Illustrated Guide to Traditional Images, Icons, and Emblems* (San Francisco, 1998), p. 184.

<sup>12</sup> *Ibid.*

of the twentieth century, the Huichol Indians of the Mexican Sierra Madre were still of the belief that “most of the gods and all the goddesses” are actually serpents.<sup>1</sup>

As we have already seen, Vishnu and Quetzalcoatl were two Saturnian divinities that were thought of and portrayed as serpents. They were not, however, the only Saturnian gods presented in such manner. One particular Egyptian deity known as Sata, “whose years were many,” was believed to renew himself daily.<sup>2</sup> But that was in later times. In the Book of the Dead, the deceased is made to identify himself with Osiris, with Ra, as well as with Sata,<sup>3</sup> thus identifying all three of them as one and the same deity. Since both Ra and Osiris were Saturnian gods, the serpent deity known as Sata must therefore also be seen as having been Saturnian. This is not merely our contention. That Sata stood for Saturn had been forwarded by Marcus Terentius Varro, the Roman antiquarian of the first century B. C.,<sup>4</sup> and accepted by others since then.<sup>5</sup> Much more than that, Varro was of the opinion that the word *sata* was the source behind the Latin name Saturnus.<sup>6</sup> While this derivation has met with many an objection from modern-day linguists, Sata’s Saturnian connection remains evident through the serpent’s association with Ra and Osiris.

We need not, however, rely on the above contested derivation. In Egypt, *all* the gods were symbolized by serpents.<sup>7</sup> When it comes to Saturnian deities, it is interesting to find that when Ra left the world—that is, when proto-Saturn was removed from Earth’s vicinity—he became a *small* serpent,<sup>8</sup> as was befitting his apparent diminished size. But let us not get ahead of ourselves.

Amon, too, was given a serpentine form, or at least a serpentine head.<sup>9</sup> In religious processions, the statue of Osiris was always accompanied by a serpent.<sup>10</sup> The god Amun was also known as the Primeval Serpent.<sup>11</sup> The exclamation “Back! Amun-Serpent!” forms part of a spell in the Pyramid Texts.<sup>12</sup> As in the religious beliefs of so many other ancient nations, the cosmic serpent in Egypt was regarded as the Creator.<sup>13</sup>

We meet the same situation among the religious beliefs of the ancient Mesopotamians. Ea, who perhaps was the most prominent Saturnian deity among them, has long been associated

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<sup>1</sup> C. Lumholtz, “Symbolism of the Huichol Indians,” *Memoirs of the American Museum of Natural History*, Vol. III (1907), p. 211.

<sup>2</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. 2 (N. Y., 1904/1969), p. 377.

<sup>3</sup> *Idem*, *Osiris and the Egyptian Resurrection*, Vol. II (N. Y., 1911/1973), pp. 171-172.

<sup>4</sup> Aurelius Augustinus, *De Civitate Dei*, VI:8 and VII:19;

<sup>5</sup> R. Klibansky, *et al.*, *Saturn and Melancholy* (London, 1964), p. 139; G. de Santillana & H. von Dechend, *Hamlet’s Mill: An Essay on Myth and the Frame of Time* (Boston, 1969), p. 132.

<sup>6</sup> Aurelius Augustinus, *loc. cit.*

<sup>7</sup> M. Oldfield Howie, *op. cit.*, p. 21.

<sup>8</sup> D. A. Mackenzie, *op. cit.*, p. 7.

<sup>9</sup> *Ibid.*, p. 197.

<sup>10</sup> H. M. Westropp & C. S. Wake, *Ancient Symbol Worship* (N. Y., 1875), p. 20.

<sup>11</sup> R. T. Rundle Clark, *op. cit.*, p. 241.

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*, p. 239

with “the serpent of Scripture.”<sup>1</sup> And not without reason since not only did the serpent serve as one of Ea’s emblems,<sup>2</sup> he himself was regarded as “a benevolent serpent deity,”<sup>3</sup> the very “serpent god of wisdom.”<sup>4</sup> As in the mythologies of other nations, he, too, was clearly identified with the Creator.<sup>5</sup>

As seen from Earth, proto-Saturn’s uncoiling debris expanded to cover its entire orb. Eventually, it even spiraled out beyond its periphery. It was this illusory superimposition that led to proto-Saturn’s identification as the very serpent he himself emitted. It is therefore not surprising to find Vishnu represented as a snake. In the Indian state of Mandi, Vishnu was counted among the Narains, most of which were snake gods.<sup>6</sup> But, more than that, Vishnu was actually equated with the very Ananta serpent that was said to form his bed.<sup>7</sup> This is sometimes explained as the god’s symbolic identification as eternity which, as we have seen, is what the word *ananta* means. But, as Heinrich Zimmer clarifies, “the reptile too is Vishnu.”<sup>8</sup> In fact, one of Vishnu’s “principal manifestations is Shesha, the cosmic snake,”<sup>9</sup> who, as we have seen, is merely Ananta under a different name.

When it comes to Shiva, Vishnu’s terrible counterpart, we find him lauded as the King of Serpents.<sup>10</sup> For an even more direct statement, we find that the very planet Saturn, the Sanskrit Shani, is sometimes represented as encompassed by snakes.<sup>11</sup>

In China, Huang-ti (variant Hwang Ti) was also closely associated with the dragon.<sup>12</sup> Although he is often presented as an earthly emperor who supposedly reigned sometime during the twenty-seventh century B.C.,<sup>13</sup> Huang-ti’s original identity as the kingly planet Saturn is well known.<sup>14</sup> With the uncoiling debris scrawled across proto-Saturn’s orb, it is not strange to find Huang-ti described as having possessed “a dragon-like countenance.”<sup>15</sup>

The serpentine form of ancient deities continued to be adhered to well into Roman times. Among these Latin gods was Dionysus whose snakelike character, as Ev Cochrane pointed out, was one of his most common epiphanies.<sup>16</sup> In fact, the traditional form of Dionysus in his Thracian cult centre was that of a serpent.<sup>17</sup> Janus, who was identified with chaos, was pic-

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<sup>1</sup> G. Rawlindon, *The Seven Great Monarchies of the Ancient Eastern World*, Vol. I (N. Y., 1885), p. 79.

<sup>2</sup> *Ibid.*, pp. 79, 349.

<sup>3</sup> G. Michanowsky, *The Once and Future Star* (N. Y., 1977), p. 83.

<sup>4</sup> M. Oldfield Howie, *op. cit.*, p. 168.

<sup>5</sup> M. Oldfield Howie, *loc. cit.*

<sup>6</sup> B. L. Kapoor, *op. cit.*, pp. 19, 69.

<sup>7</sup> J. Herbert, *op. cit.*, p. 212.; P. Masson-Oursel & L. Morin, *op. cit.*, p. 359

<sup>8</sup> H. Zimmer, *loc. cit.*, pp. 37-38.

<sup>9</sup> *Ibid.*, p. 88.

<sup>10</sup> M. Oldfield Howie, *op. cit.*, p. 64.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*, p. 255.

<sup>13</sup> *Ibid.*

<sup>14</sup> G. de Santillana & H. von Dechend, *op. cit.*, pp. 129, 135; see also *God Star*, pp. 237, 264, 317.

<sup>15</sup> M. Oldfield Howie, *loc. cit.*

<sup>16</sup> E. Cochrane, “Kadmos: The Primeval King,” *KRONOS* XI: 3 (Summer 1986), p. 7.

<sup>17</sup> L. Farnell, *The Cults of the Greek States*, Vol. V (New Rochelle, 1977), p. 166.



tured as a dragon by the Phoenicians.<sup>1</sup> And although Macrobius linked him with the Sun, he was not unaware of the god's function as Creator.<sup>2</sup> In one Orphic fragment, Kronos himself, the archetypal Greek Saturn, is called a serpent.<sup>3</sup> And, much like Vishnu was said to have used the serpent as his bed or conveyance, so has Saturn been depicted through the ages as having ridden in a chariot that is drawn by dragons.

## CELESTIAL RIVERS

In ancient religious beliefs, rivers were often thought to have been serpents. According to William Albright, this would have been quite natural since, as he tells us, "nothing is more common than to compare a meandering stream to the sinuous folds of a snake."<sup>4</sup> Yet this does not tell us why most ancient rivers were also believed to have been celestial in origin.

The River Nile, which the Egyptians deified as Hapi, was alleged to have flowed across the sky. In pre-dynastic times, Osiris was not only regarded as a river god,<sup>5</sup> he was thought of as the Nile itself since, "in one aspect," as Budge tells us, Hapi was identified with him.<sup>6</sup> Together with other serpentine deities, the Nile was also thought of as the Creator. Hapi was in fact declared to have been the creator of everything there is.<sup>7</sup>

In keeping with our serpentine motif, it should be noted that, while some had it that the Apep serpent, or Apophis, lurked within the cosmic ocean,<sup>8</sup> others claimed he lived in the depths of the celestial Nile.<sup>9</sup>

While, as with serpents and dragons, there was more than one celestial river, the above clearly indicates that proto-Saturn's uncoiling debris was also visualized as a meandering cosmic stream.

## INTESTINAL ENTITIES

Apep was not only described as a winding serpent, but one that had the form of an intestine.<sup>10</sup> This brings to mind the proto-Saturnian Tlaloc whose very face has been depicted as composed of winding serpents very much like such entrails.

There was, however, an even earlier entity who also had his face composed of twisting innards. The Assyrian version of the *Sha Naqba Imuru*, commonly referred to as the *Epic of Gilgamesh*, names him as Humbaba. In the Old Babylonian and Hittite versions, he is referred to as Huwawa.

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<sup>1</sup> Macrobius, *Saturnalia* I: 9: 9-12.

<sup>2</sup> *Ibid.*

<sup>3</sup> P. B. Onians, *The Origins of European Thought about the Body, the Mind, the Soul, the World, Time, and Fate* (Cambridge, 1954), pp. 249 ff.

<sup>4</sup> W. F. Albright, "The Mouth of the Rivers," *The American Journal of Semitic Languages and Literature* (July 1919), pp. 167-168.

<sup>5</sup> E. A. W. Budge, *The Gods of the Egyptians*, Vol. II (N. Y., 1904/1969), p. 42.

<sup>6</sup> *Ibid.*, pp. 46, 47.

<sup>7</sup> *Ibid.*, pp. 44, 46, 47.

<sup>8</sup> F. Fleming, *loc. cit.*

<sup>9</sup> J. Vialud, "Egyptian Mythology," *New Larousse Encyclopedia of Mythology* (London., 1972), p. 11.

<sup>10</sup> E. A. W. Budge, *The Book of the Dead* (N. Y., 1913/1960), p. 142.



Saturn—as Triptolemus—riding in his dragon chariot.



Another view of Saturn in his dragon chariot.

The epic mentioned above describes the entity in question as roaring like a flood storm, with mouth afire and the breath of death, with Earth resounding in a darkened day, while lightning flashed through thickened clouds and hot winds blew all over the land.<sup>1</sup> Understandably enough, this has been seen by some as signifying an erupting terrestrial volcano.<sup>2</sup> One problem with this is that no matter what Mesopotamian deity one had to investigate, similar descriptions surface in most of the epics and liturgical hymns devoted to them. If we were to judge solely by such descriptions, Humbaba, and/or Huwawa, would not be the only Mesopotamian deity who should be interpreted as a volcanic eruption.

A similar concept was suggested back in 1930 by R. C. Thompson who compared Huwawa to "the burning petroleum fires of Kirkuk Baba".<sup>3</sup> The same idea was resuscitated almost fifty years later by Kinier Wilson who sought to explain just about all of Mesopotamian mythological characters as the explosive petroleum geysers of the Kabir Kuh region in south-western Iran.<sup>4</sup> Needless to say, he did not fail to fit Huwawa in his fiery gaseous scheme.<sup>5</sup>

Given the geological nature of the land that was once Mesopotamia, Wilson's proposal might be seen by some to have some merit, but two vital questions that this theory begs have never been resolved. Why is it that the mytho-historical records of other nations bereft of any

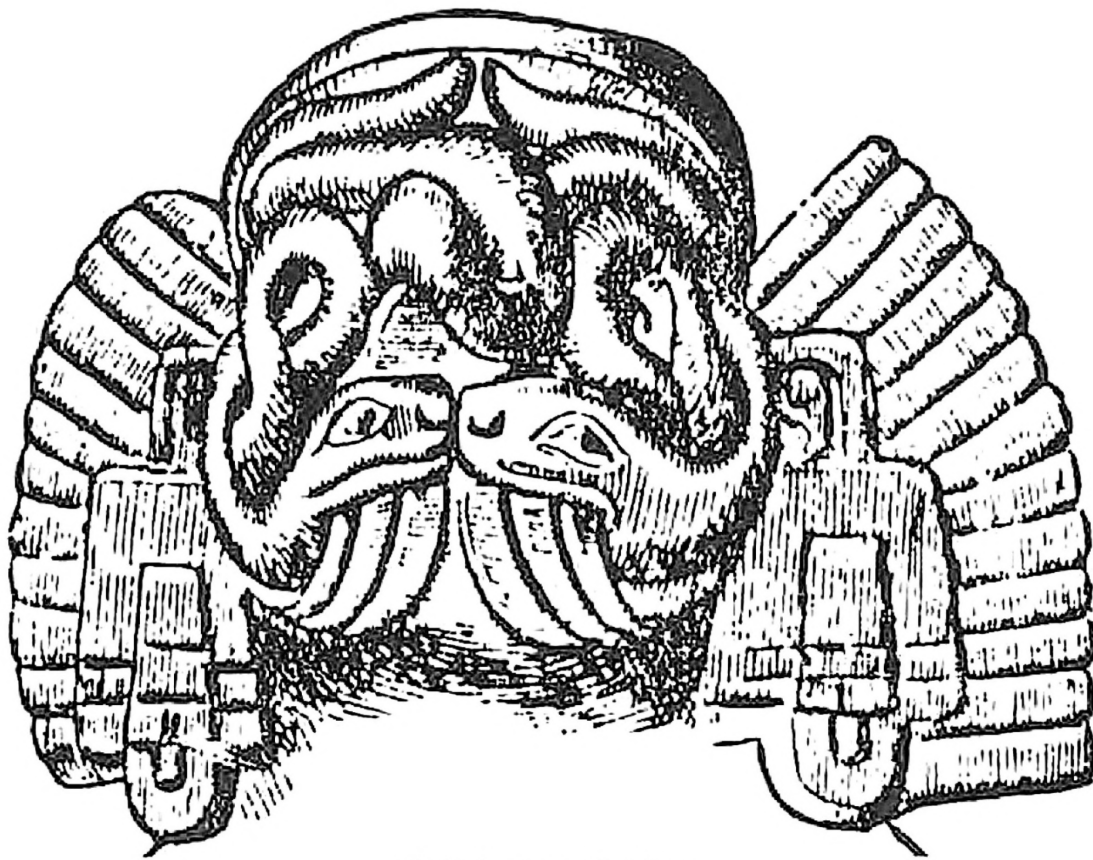
<sup>1</sup> A. Heidel, *The Gilgamesh Epic and Old Testament Parallels* (Chicago, 1946/1963), p. 35.

<sup>2</sup> N. Schwartz, "Huwawa Explained as Volcano," *AEON*, II:1 (June 1989), pp. 130-131.

<sup>3</sup> R. C. Thompson, *The Epic of Gilgamesh* (N. Y. 1930/1979), p. 77.

<sup>4</sup> J. V. K. Wilson, *The Rebel Lands* (Cambridge, 1979), *in toto*.

<sup>5</sup> *Ibid.*, p. 80.



Tlaloc's serpentine face.

petroleum fields have so much in common with Mesopotamian ones? And what logical process could have shifted the embodiments of these terrestrial phenomena into the realm of the sky where we find the deities in question identified by those who venerated them as personifications of the planets?

Stephen Langdon rightly informs us that, "in the texts," Humbaba is "invariably called a god."<sup>1</sup> Additional to that, Humbaba's identity as a celestial body is evidenced by the fact that his Elamite counterpart, Humba (also Humbar, Hanubani, Hambar, Umman, and/or Imbi), appears in a star list with the determinative *mul* (in Babylonian rendered *kakkab*) that is reserved for the designation of stellar bodies.<sup>2</sup>

Langdon identified Humbaba, but only tentatively, as the star Procyon, the brightest luminary in the constellation Canis Minor.<sup>3</sup> Giorgio de Santillana and Hertha von Dechend additionally inform us that Humba shares the epithet "the prevalent, the strong" not only with

<sup>1</sup> S. Langdon, *Semitic Mythology*, Vol. 5 of *Mythology of All Races* (N. Y., 1931/1964), p. 253.

<sup>2</sup> E. F. Weidner, *Reallexikon der Assyriologie*, Vol. 2, p. 389.

<sup>3</sup> S. Langdon, *op. cit.*, p. 268.



Procyon, but also with the planets Mercury and Jupiter.<sup>1</sup> But so what? Similar epithets were bestowed on almost every god and planet in the mythologies of all nations. Ernst Weidner, the noted Assyriologist, played it safe by not identifying the Elamite Humba at all.<sup>2</sup>

For reasons which we do not need to go into, de Santillana and von Dechend intimated that the serpentine features of Tlaloc's face and the intestinal one of Humbaba could represent the continuous track of the planet Mercury's orbit around the Sun over time as it would have been drawn by an observer from Earth.<sup>3</sup> This Mercurian identification was later picked up by Robert Temple.<sup>4</sup> Unfortunately, his attempted association of the Egyptian name of Mercury with the word for "cedar," a forest of which figures prominently in the tale of the metamorphosed Humbaba, leaves much to be desired.<sup>5</sup> But even if the linguistic association he presented was to hold, what has the name of a tree to do with Humbaba's celestial identification?

Temple should have kept in mind that de Santillana and von Dechend were not really satisfied with their own identification of Humbaba as the planet Mercury that they only presented as a prematurely hazarded guess.<sup>6</sup> On the other hand, neither were these two researchers satisfied with anybody else's identification. At one point they came close to favoring Procyon, stating that this particular identification "may eventually turn out to be the decisive clue,"<sup>7</sup> even though they themselves pointed out that Langdon, who had aired it, had not only failed to present any evidence in its favor, but did not really pay any heed to it.<sup>8</sup> As they were finally forced to concede: "Precipitate identifications lead only to mischief, and the 'Case Humbaba' is *not even partly solved*, despite many efforts."<sup>9</sup> This verdict, however, was reached only because they chose to ignore some of the very evidence they had themselves uncovered.

Among such evidence was their favorable comparison of Humbaba's intestinal face with Tlaloc's serpentine one,<sup>10</sup> a comparison that should have led them to the correct identification had they paid greater attention to Tlaloc's Saturnian identity. Tlaloc aside, however, Fritz Hommel had already shown that the very name Humbaba means "Hum-is-the-father," where he takes *hum* to mean "creator."<sup>11</sup> As we have been indicating and will continue to demonstrate, the deity who was revered in antiquity, under various names, as the Creator *par excellence* was the Saturnian one. What is more telling is that Hommel equated the Elamite Amman-ka-sibar, which is derived from Chumban-uk-Sinarra, with Ninib.<sup>12</sup> A variant transliteration of Chumban is Humban, which is merely a variant of Humba, the Elamite version of

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<sup>1</sup> G. de Santillana & H. von Dechend, *Hamlet's Mill: An essay on Myth and the Frame of Time* (Boston, 1969), p. 289.

<sup>2</sup> E. F. Weidner, *loc. cit.*

<sup>3</sup> G. de Santillana & H. von Dechend, *op. cit.*, p. 290 and illustrations following same.

<sup>4</sup> R. K. G. Temple, *The Sirius Mystery* (N. Y., 1976), pp. 90-91.

<sup>5</sup> See here, D. Cardona, "Humbaba," *KRONOS*, IX: 2 (Winter 1984), p. 8.

<sup>6</sup> G. de Santillana & H. von Dechend, *loc. cit.*

<sup>7</sup> *Ibid.*, p. 289.

<sup>8</sup> *Ibid.*, p. 403.

<sup>9</sup> *Ibid.*, p. 290 (emphasis added).

<sup>10</sup> *Ibid.*

<sup>11</sup> F. Hommel, *Ethnologie und Geographie des Alten Orients* (Munich, 1926), pp. 35, 42.

<sup>12</sup> *Ibid.*, p. 35.



Humbaba's intestinal face—terracotta mask.

Humbaba.<sup>1</sup> It is unfortunate that Hommel then equated Ninib with Mars,<sup>2</sup> although he is not the only one to have ever done so. But that Ninib actually stood for Saturn had earlier been determined by Morris Jastrow, Jr.<sup>3</sup>

The same identification can also be reached by following a different path that is in fact one that had also been trodden by de Santillana and von Dechend. As they themselves indicated, even though Langdon disagreed,<sup>4</sup> the Assyrian Humbaba is identical to the Iranian Kombabos,<sup>5</sup> while Frank Movers had no difficulty in identifying Kombabos as Saturn.<sup>6</sup> Langdon's disagreement rests on the myth in which Kombabos, whom he renders as Combabus, castrates himself,<sup>7</sup> which event is not known to be shared by Humbaba or Huwawa. But that the proto-

<sup>1</sup> E. F. Weidner, *loc. cit.*

<sup>2</sup> *Ibid.*

<sup>3</sup> M. Jastrow, Jr., "Sun and Saturn," *Revue D'Assyriologie et D'Archeologie Orientale* (Sept. 1910), p. 172.

<sup>4</sup> S. H. Langdon, *op. cit.*, p. 253.

<sup>5</sup> G. de Santillana & H. von Dechend, *op. cit.*, p. 404

<sup>6</sup> F. K. Movers, *Die Phönizier*, as cited by G. de Santillana & H. von Dechend, *loc. cit.*

<sup>7</sup> S. H. Langdon, *op. cit.*, p. 75.

Saturnian deity did castrate himself is also very well known.<sup>1</sup> In fact, he might have done it more than once.

It is therefore quite obvious that de Santillana and von Dechend were well aware of Humbaba's identity as a Saturnian deity. That they chose not to accept it may be considered something of a pity, but, in their case, not to be wondered at. While their own research, very much like ours, continuously led them to Saturn, they were unable to fit what the ancients reported about that planet into the uniformitarian theory of astronomy they continued to hold on to. While confessing their mystification at Saturn's persistent intrusion into the scheme they were trying to decode,<sup>2</sup> they consistently brushed it aside instead of following the evidential path their own research kept leading them to.

As if all the above is not enough, the Elamite version of this god, known as Humba and/or Hubaba, is textually identified as Enlil,<sup>3</sup> the Saturnian identification of whom has already been documented in a past chapter of this very work. And there is even more.

More recently, on the basis of additional evidence, Ev Cochrane has ably demonstrated that Huwawa was merely "Shamash in monstrous guise," since both these deities share certain specific mythological attributes.<sup>4</sup> As he, in fact, concludes:

"...the similarities between Huwawa and Shamash are so close as to amount to a virtual identification. And given the fact that Shamash was originally identified with the planet Saturn, it is most significant to find that Huwawa has also been identified with that planet."<sup>5</sup>

In time, because of the cosmic tree he is said to have guarded<sup>6</sup>—a topic we shall be discussing in a future volume—Huwawa was metamorphosed by his narrators into the giant custodian of the Lebanese cedar forests. Much has been made of this confusion in the just as confused study of ancient civilizations.<sup>7</sup> So, similarly, with Langdon. After having demonstrated Huwawa's cosmic identity, he then tells his readers that the deity had originally been an actual "historical person" whom he described as "the foe of the Early Sumerian kingdom."<sup>8</sup> The epic in which he is made to partake, he tells us, "was based upon historical circumstances, developed under the glamour of legend into a great national poem which served as [a] medium for teaching some of the most important doctrines of the Sumero-Babylonian religion."<sup>9</sup> He nowhere informs us who this "historical person" actually was, as neither does he tell us what the

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<sup>1</sup> See *Flare Star*, pp. 279-280 for the full import of this event.

<sup>2</sup> G. de Santillana & H. von Dechend, *op. cit.*, p. 136.

<sup>3</sup> S. H. Langdon, *op. cit.*, p. 255.

<sup>4</sup> E. Cochrane, "Heracles and the Planet Mars," *AEON* I:4 (1988), p. 96.

<sup>5</sup> *Ibid.*, p. 97; see also *idem*, *Martian Metamorphoses: The Planet Mars in Ancient Myth and Religion* (Ames, 1997), pp. 9-10.

<sup>6</sup> F. Hommel, *op. cit.*, pp. 35, 42.

<sup>7</sup> See here, especially, Y. Yasuda, "Comparative Study of the Myths and History of a Cedar Forest Each in East and West Asia," in Y. Yasuda (Ed.), *Forest and Civilisations* [as spelled] (New Delhi, 2001), pp. 13 ff.

<sup>8</sup> S. H. Langdon, *op. cit.*, p. 268.

<sup>9</sup> *Ibid.*, p. 269

“historical circumstances” he was involved in really were. This was Euhemerism at its very best, when, in fact, the opposite was true. And yet, in a strange sort of way, Langdon was entirely correct. The epic in question is based on “historical circumstances,” and, yes, it was developed into “a great national poem”—even though it went through various versions over time. It is all as Langdon claimed, *as long as it is kept in mind that the original historical circumstances upon which the epic is based took place above Earth’s north celestial pole.*

## UTU AND THE ANTAKA

A Hittite myth that manages to throw further light on the above has not survived in its entirety. What is even worse is that Hittologists are not unanimous when it comes to the translation of certain words, let alone what the myth actually means. What is certain is that the myth concerns Utu, misunderstood by most mythologists as our regular Sun, as various Saturnian deities tend to be. In describing his disappearance, as discussed in a previous chapter of this work, Utu was said to have gone “to the Sea, to his *antaka*.”<sup>1</sup> In keeping with what we have already ascertained, the “Sea” is here understood as the celestial ocean—in other words, proto-Saturn’s circumstellar disk. But what does *antaka* really mean?

Johannes Friedrich translated this troublesome word as “intestines.”<sup>2</sup> To most mythologists, however, this translation did not seem to make much sense. As it has been asked, what could it mean that Utu went to his, or to the Sea’s, intestines?

A few years later, Albrecht Goetze re-translated the word as “room” or “chamber.”<sup>3</sup> If nothing else, this made better grammatical sense, even though it did not elucidate the actual intent of the statement.

That is where matters stood for decades until Craig Melchert saw fit to contest Goetze’s interpretation.<sup>4</sup> He claimed that Friedrich had been correct in suggesting that *antaka* stood for a specific body part,<sup>5</sup> but was not happy with its rendering as “intestines.” For reasons that were rather circumstantial, he believed *antaka* would be best interpreted as “loins.”<sup>6</sup> Yet even this failed to make sense. As Melchert himself asked, “what are we to make of the idea” that the Sun-god went to the Sea’s loins?<sup>7</sup> While stating that he did “not have space to discuss fully the very interesting but difficult mythical passage” in question,<sup>8</sup> Melchert was honest enough to confess that he could “make no coherent sense” of the tale, and decided to “leave further interpretation of this fascinating mythical episode to others.”<sup>9</sup>

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<sup>1</sup> H. C. Melchert, “Hittite *antaka*—‘loins’ and an Overlooked Myth about Fire,” in G. Beckman, *et al.*, *Hittite Studies in Honor of Harry A. Hoffner Jr.* (Winona Lake, Indiana, 2003), pp. 281-282.

<sup>2</sup> J. Friedrich, *Hethitisches Wörterbuch* (Heidelberg, 1952), p. 23.

<sup>3</sup> A. Goetze, “Hittite Rituals, Incantations, and Description of Festival,” in J. Pritchard (ed.), *Ancient Near Eastern Texts Relating to the Old Testament* (Princeton, 1955), p. 349.

<sup>4</sup> H. C. Melchert, *op. cit.*, p. 282.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*, p. 286.

<sup>7</sup> *Ibid.*, p. 286.

<sup>8</sup> *Ibid.*, p. 285.

<sup>9</sup> *Ibid.*, p. 286.



While Friedrich's translation of *antaka* as intestines seems just as nonsensical, it is only because the phrase in question is taken out of mytho-historical context. Beyond that, there is also a certain amount of ambiguity in the tale itself. What must be kept in mind is that those who first put it into writing had heard of the event by word of mouth as it had been told through ages past. Not having witnessed the occurrence with their own eyes, they could only surmise what came to pass as best they could. Even those who had witnessed the occurrence and lived through the ensuing cataclysm could only guess at what really had transpired. It is not in the least surprising that they later colored the event, and all that followed, with their own interpretation of what lay behind the god's dramatic actions as well as his intentions.

## DIVINE DISEMBOWELMENT

In the Hittite myth in question, as already noted, Utu's disappearance was accomplished by his going into the "night," which here stands for the darkness that gripped heaven, as well as Earth, due to the spreading dust emitted by proto-Saturn's outburst. He did not, however, merely go *into* the "night." It is actually said he "blended" with it "like a snake,"<sup>1</sup> which would have been the appearance assumed by proto-Saturn due to its unwinding coil of dusty debris.

That serpents and intestines were associated with each other is borne out by the Egyptian Apep who, although a serpent, as we have seen, was likened to a winding intestine,<sup>2</sup> the very entity that led us to Humbaba. In fact, the imagined association of these impressions left its mark on the vocabulary of the Egyptian language, as notice, for example, the word *qab*. This simple term actually means "intestines,"<sup>3</sup> but the related *qabu* translates as "windings" and/or "coils," while also standing for "the folds of a serpent."<sup>4</sup> The same word also lent itself as a name—rendered as Qabi—to a mythological snake.<sup>5</sup>

Intestines connote evisceration and, while not exactly common, disembowelment among the gods was a belief held in antiquity. Apep was not only a snake that was likened to a winding intestine, he was also disemboweled.<sup>6</sup> It is thus understandable that proto-Saturn's unwinding debris would also have been seen by some as an evisceration, which is why Humbaba's face was shown to be formed out of entrails rather than coiling serpents as in Tlaloc's case.

What the reader should never lose track of is Earth's axial alignment with proto-Saturn. As seen from Earth's vantage point, the unraveling phenomena above, around, and below proto-Saturn would have been visually superimposed on each other. Thus, as proto-Saturn's spiraling debris continued to expand, it was visually seen to merge with its dissipating circumstellar disk that was slowly going through its own chaotic disarray. An allusion to this evolv-

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<sup>1</sup> *Ibid.*, p. 284.

<sup>2</sup> E. A. W. Budge, *loc.cit.*

<sup>3</sup> *Idem*, *An Egyptian Hieroglyphic Dictionary*, Vol. II (N. Y., 1920/1078), p. 763.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Idem.*, *The Gods of the Egyptians*, Vol. I (N. Y., 1904/1969), p. 447.

ing portent is mentioned, even if only casually, in an Egyptian papyrus which states that the sea, that must here be mythologically understood as the cosmic ocean, was also represented by a serpent monster.<sup>1</sup> The *Hermitage Papyrus* then tells us that “the High God himself” had to restrain the waters.<sup>2</sup> Rundle Clark might not have known exactly what was meant by these allusions, but he did realize that, as far as “the peoples of antiquity” were concerned, the world had to be “protected against the disintegrating forces of the surrounding chaos.”<sup>3</sup> In this respect, Asimov proved to be the better mythologist by correctly understanding such allusions as referring to God’s accomplishment during Creation “by destroying the monster representing the chaotic sea.”<sup>4</sup> What must be added is that the relatively slow disintegration of proto-Saturn’s chaotic circumstellar disk was also envisioned as an evisceration. As it is narrated in the Babylonian *Enuma Elish*, the so-called *Epic of Creation*, Tiamat’s bowels, that is her guts, were “torn asunder.”<sup>5</sup> It is these guts, these intestines, that Utu was seen to merge with like a snake.

### THE WINDING LABYRINTH

Proto-Saturn’s spiraling emission was also likened to a winding passage, a circular corridor leading to the center of the orb from which it was seen to emanate. This uncoiling track would have assumed more complexity once it spread beyond the circumference of the proto-Saturnian orb to superimpose itself on the chaotic dissolution of its circumstellar disk. To those who looked on in awe, perhaps even in horror, Utu’s snakelike outpouring was seen to merge with the Sea’s intestinal dispersal in a veritable maze. That, in fact, is what lies behind the concept of the mythological labyrinth, depictions and descriptions of which, to say nothing of imitations, can be found all over the world.

One of the titles bestowed on Humbaba was “God of the fortress of intestines,”<sup>6</sup> which fortress was presented as a labyrinthine enclosure.<sup>7</sup> Despite its eventual transformation into various intricate forms, it was never quite forgotten that the labyrinth’s original structure had been nothing but a spiral.<sup>8</sup> The close relation between spirals, intestines, and labyrinths reaches back into antiquity as far as mankind’s memory can be tapped. Our ancient ancestors were so entranced with proto-Saturn’s spiraling debris that its configuration continued to impress them in various ways through the ages down into modern times. The very concept behind the expanding spiral as a labyrinth and the connection of both with each other continues to fill countless pages in works dealing with mystical experience.<sup>9</sup> Nor has any of this managed to disassociate the labyrinth from intestines.<sup>10</sup> In fact, divination through the examination of

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<sup>1</sup> R. T. Rundle Clark, *op. cit.*, p. 240.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> I. Asimov, *op. cit.*, p. 487.

<sup>5</sup> S. H. Langdon, *op. cit.*, p. 294.

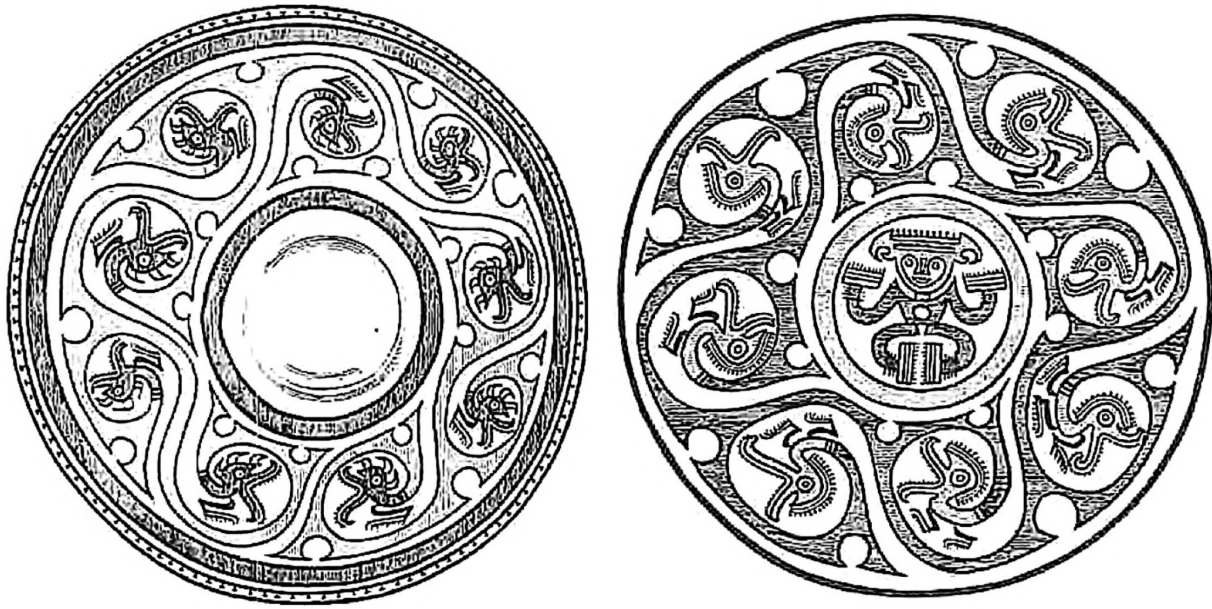
<sup>6</sup> G. de Santillana & H. von Dechend, *op. cit.* facing p. 290.

<sup>7</sup> F. M. Böhl, as cited in *ibid.*, p. 290.

<sup>8</sup> J. Purce, *The Mystic Spiral* (London, 1974), p. 28.

<sup>9</sup> See *ibid.*, pp. 28-29.

<sup>10</sup> *Ibid.*



While, at such a late date, they may not represent exactly what it looked like, examples of the labyrinth that include spiraling trails in conjunction with serpentine characteristics can be found emblazoned on various objects, but mostly plates, such as the ones above, among the pottery recovered from Coclé graves in Panama dated between 500 to 1550 AD.

entrails was also coupled with labyrinths,<sup>1</sup> as so, incidentally, was the involvement of labyrinths with coiled snakes.<sup>2</sup> And if that is not enough, rituals that involved labyrinthine associations were also held in memory of “the original cosmic creation,”<sup>3</sup> a belief that is avidly maintained by many Mexican Indians.<sup>4</sup>

In time, proto-Saturn’s labyrinth was to evolve even further, but that, too, must await further discussion in a future volume.

## BEHEMOTH

We have seen Leviathan described as a sea monster. Some have actually identified him *as* the sea.<sup>5</sup> To others, however, he was merely said to have lived *in* “the depths of the sea.”<sup>6</sup> This seems to have been the older belief as it is found in the Book of *Isaiah*, where Leviathan is called “the dragon that is *in* the sea.”<sup>7</sup> As it was, however, later claimed, he was eventually

<sup>1</sup> J. C. Cooper, *An Illustrated Encyclopedia of Traditional Symbols* (N. Y., 1979/1999), pp. 92-93.

<sup>2</sup> *Ibid.*

<sup>3</sup> J. Purce, *op. cit.*, p. 29.

<sup>4</sup> F. Hitching, *The World Atlas of Mysteries* (London, 1979), p. 158.

<sup>5</sup> L. Ginzberg, *op. cit.*, p. 43

<sup>6</sup> *Ibid.*, p. 44.

<sup>7</sup> Isaiah 27:1 (emphasis added).

dragged out of “the Great Sea” in which he had been hiding.<sup>1</sup> Despite all that, none of it serves to disassociate Leviathan from the celestial realm as long as it is understood that “the Great Sea” originated as an allusion to the cosmic ocean rather than the Mediterranean as usually believed. This ambiguity is in fact resolved by Leviathan’s identification as “the vault of heaven.”<sup>2</sup> After all, the Hindu Shesha, as well as his Ananta alter-ego, to say nothing of Vishnu himself, were also seen as representing the waters of the cosmic ocean.<sup>3</sup>

In our own reconstruction of the events, Leviathan’s association with the cosmic sea was due to the overlapping of the celestial portents we have already touched upon. Thus, as the uncoiling debris continued to expand, it was visually seen to merge with the unraveling circumstellar disk that had been hugging proto-Saturn’s equatorial region. Serpent and sea had visually become one.

This, then, brings us to Behemoth.

Together with Leviathan, as we have seen, this creature has been misidentified as various terrestrial animals.<sup>4</sup> To an extent this is understandable since *behemoth* is the Hebrew plural of *behemah*—*bhima* in Maltese—which means “beast.”<sup>5</sup> To Donald Patten and his associates, Behemoth stood for the planet Mercury.<sup>6</sup> But, as Asimov well realized, Behemoth “bears a mythological character” and should rightly be viewed in that way.<sup>7</sup>

There is, however, a problem with seeing *behemoth* as the plural of *behema*. James Strong contested it. While in form, as he has stated, the word *is* a plural, in context it definitely appears as a singular.<sup>8</sup> Lloyd Graham might be more correct in seeing a connection between *behemoth* and *bohu*, the original chaos out of which Elohim fashioned his Creation.<sup>9</sup> If that is correct, it would turn out that it was Behemoth that actually stood for the cosmic ocean, and that Leviathan only merged with it. Can this view be validated?

Let us first keep in mind that, when it comes to these two creatures, they were said to have been kept from propagating their own kind so that only one of each ever existed.<sup>10</sup> If nothing else, this continues to rule out any identification with real terrestrial beasts.

Behemoth’s cosmic identity is hinted at when it is said that his “habitation” was “in the proximity of paradise.”<sup>11</sup> He was said to have required an entire stream for his survival and was therefore supplied with the one called Yubal that flows from the same paradise.<sup>12</sup> As we have seen, the plasmatic coil of detritus emitted by proto-Saturn was visualized by some observers as a celestial river. The paradisiacal river called Yubal would then be the same as

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<sup>1</sup> L. Ginzberg, *op. cit.*, p. 43.

<sup>2</sup> *Ibid.*, p. 45.

<sup>3</sup> H. Zimmer, *op. cit.*, pp. 76, 202.

<sup>4</sup> See here, additionally, I. Asimov, *op. cit.*, p. 485.

<sup>5</sup> *Ibid.*; J. Strong, *op. cit.*, p. 19.

<sup>6</sup> D. W. Patten, *et al.*, *loc. cit.*

<sup>7</sup> I. Asimov, *op. cit.*, p. 485.

<sup>8</sup> J. Strong, *loc. cit.*

<sup>9</sup> L. Graham, *op. cit.*, p. 30.

<sup>10</sup> L. Ginzberg, *op. cit.*, Vol. I, p. 30.

<sup>11</sup> *Ibid.*, Vol. V, pp. 44, 49.

<sup>12</sup> *Ibid.*, Vol. I, p. 30; Vol. V, p. 42.



Leviathan before its serpentine emission was seen to merge with the circumstellar cosmic sea. One even wonders if the name "Yubal" could have been derived from "Yahweh-Baal."

The visual merging of the two unraveling portents was visualized, at least by some, as a contest between the two which, as with many of these cosmic battles, was later shifted to the end of time.<sup>1</sup> One of these versions has it that Behemoth will be slain by Leviathan,<sup>2</sup> while other versions proclaim that both of them will be annihilated.<sup>3</sup>

Asimov understood this quite well when he presented it as "a reference to a primitive myth in which God is pictured as bringing about creation by destroying the monster representing the chaotic sea."<sup>4</sup> This is additionally indicated in a variant of the myth in which, rather than the sea, Leviathan was said to have lain in the abyss.<sup>5</sup> This abyss is the very *tehom* that is rendered into English as "the deep" or "the waters," over which the *ruach* of Elohim was said to have moved just prior to Creation.<sup>6</sup> And although Asimov presented the destroying of the chaotic sea as an alternative to the rendering of order out of chaos, the two incidents were part and parcel of the same event.

On this topic, Nahum Sarna also lent his voice. From "many scattered allusions in biblical literature," he tells us, one can detect "the popular belief" that, in "the days of old," the "forces of watery chaos," including Leviathan, "were subdued by God."<sup>7</sup>

As he goes on:

"[This] myth, once fully developed, appears in a very attenuated and fragmentary form in the biblical sources and the several allusions have to be pieced together into some kind of coherent unity. Nevertheless, there is ample witness to the fact that the myths to which these allusions refer found literary expression in ancient Israel and were sufficiently well known to be used as reference points in literary compositions."<sup>8</sup>

As Graham correctly noted, by the time this account ended up in the Old Testament, "the Hebrews had lost all knowledge of Causation and Creation."<sup>9</sup> It was not, however, just the Hebrews. The entire ancient world eventually lost this knowledge by misconstruing what the ancients had been trying to recount.

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<sup>1</sup> *Ibid.*, Vol. I, p. 28.

<sup>2</sup> *Ibid.*, Vol. V, p. 48.

<sup>3</sup> *Ibid.*, Vol. I, p. 28; Vol. V, p. 43.

<sup>4</sup> I. Asimov, *op. cit.*, p. 487.

<sup>5</sup> L. Ginzberg, *op. cit.*, Vol. V, p. 49.

<sup>6</sup> Genesis I: 2.

<sup>7</sup> N. M. Sarna, *op. cit.*, p. 2.

<sup>8</sup> *Ibid.*

<sup>9</sup> L. Graham, *Deceptions and Myths of the Bible* (N. Y., 1979), p. 29.

# Epilogue

## LONE TRAVELERS THROUGH SPACE

**I**t does not end. Discoveries keep coming in even as we continue to reconstruct Earth's cosmic past, including its geological history, the evolution and extinction of its past forms of life, and, needless to say, our own place in all of it. What we thought we knew even a few decades ago is hardly the same as what we think we now know. It is not simply that what we now know is more refined. What it has come to is that, in some cases, it is entirely different, and sometimes contrary, to what we had been sure we knew.

The Solar System in which we all live has been supplying astrophysicists with so many conundrums that it is leaving this particular branch of science in a morass of clashing theories. Just as an example, and without getting into technicalities, the contents of some meteorites have led some astronomers to believe that our System “may have been formed very quickly from the ashes of other stars.”<sup>1</sup> The ashes of “other” stars connote more than one destroyed star. Others, however, now maintain that the Solar System “may have been born inside the remains of a *single* star that ran away from its family, rather than from a tight-knit clan of stars.”<sup>2</sup> The single star scenario, however, has been said to run into trouble when attempting to explain “how hot gas from the star could mix with surrounding material efficiently enough to form the solar system quickly.”<sup>3</sup>

It is not that we personally accept any of the above propositions, but it is quite true, as the report in question declares, that our galactic home is “more unusual than previously thought.”<sup>4</sup> Chances of ever really coming to grips with its *origin* are not, however, likely. Not at this late date. We are on much better ground when it comes to the System's *evolution*.

Even so, a runaway star like the one theorized above has actually been spotted by the Hubble Space Telescope. It is said to be “racing away from its home stellar nursery after being kicked out by some of its much heftier stellar siblings.”<sup>5</sup> Having first been spotted by the Anglo-Australian Telescope at the Siding Spring Observatory in Australia, the rogue star has been tracked since 2006. It may not even be the only runaway on the outer fringes of the Tarantula Nebula in our Galaxy's neighbor, the Large Magellanic Cloud.<sup>6</sup>

Stars, however, are not the only vagrants traveling alone through space. On the basis of what is actually seen, in addition to what is merely detected, it has become apparent that there are an “untold” number of worlds that have either “fallen into their suns” or have been “flung out of their systems to become ‘floaters’ that wander in eternal darkness.”<sup>7</sup> These free-floaters

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<sup>1</sup> R. Courtland, “Runaway Star May Have Spawned the Solar System,” *newscientist.com* (March 31, 2010).

<sup>2</sup> *Ibid.* (Emphasis added).

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> “Runaway Star Flees Birthplace at Breakneck Speed,” *space.com* (May 11, 2010).

<sup>6</sup> *Ibid.*

<sup>7</sup> T. Ferris, “Worlds Apart: Seeking New Earths,” *National Geographic* (December 2009), p. 91.

are now believed to be twice as numerous as stars.<sup>1</sup> As we have now noted more than once, there is therefore nothing strange in our own theoretical construct that calls for a nascent Earth traveling through space outside the realm of our present Sun.

## DWARF STAR SYSTEMS

Unlike the planets mentioned above, however, Earth was not alone. As we have been demonstrating, our world had been traveling in the company of a brown dwarf star that acted as its primordial source of heat. Such a theorized system might also have been thought highly unlikely a few decades ago. Look at the evidence now.

In August 2005, an entire planetary system was discovered orbiting a red dwarf star, the one known as Gliese 581. The system this star harbors consists of four individual planets. Located 20.3 light years from us, it was not the first such system to come to light. What made it especially interesting is that, by 2009, one of its planets was exposed as the lightest ever detected up to that time. Because it only contains 1.9 Earth masses, this particular planet, very much like our own world, is probably of a rocky composition. But because it orbits much too close to its host star, its temperature is said to be too high to support a substantial atmosphere.<sup>2</sup>

The outer planet in the same system, however, orbits within a region that “possesses temperatures and conditions favorable for liquid water and life as we know it on Earth.” On the other hand, unlike its inner orbiting sibling, it is considered too massive to be rocky.<sup>3</sup>

Another planet described as a super-Earth was also discovered orbiting another red dwarf star, 40 light-years from Earth, in December of 2009. Much more massive than the inner one orbiting Gliese 581, it is also thought to be too hot to sustain life. Nevertheless, its density indicates that it is probably part rock, but mostly water, while it might also possess an atmosphere.<sup>4</sup>

Critics may point out that these systems are centered on red dwarf stars and not brown dwarfs as posited in our scenario. But apart from the fact that brown dwarf stars only differ from their so-called red siblings in being slightly less massive, it is slowly being discovered that, in the main, they behave no differently. As the Bulgarian physicist Vladimir Damgov pointed out, brown dwarf stars “generate enough heat to shine,” even if mostly, but not entirely, in the infra-red. They have, moreover, “been found in so many bizarre configurations that researchers are scrambling to figure out whether they are dealing with one class of objects or several.”<sup>5</sup>

“Lone brown dwarfs have been spotted wandering through space fairly close to Earth. Others have been detected at vast distances from other stars, forming nests. Brown dwarfs might even spawn their own planetary systems.”<sup>6</sup>

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<sup>1</sup> “Free-Floating Planets May be More Common Than Stars,” *sciencedaily.com* (May 18, 2011).

<sup>2</sup> E. Baldwin, “Two Steps Closer to Finding Earth’s Twin,” *Astronomy Now* (June 2009), p. 66.

<sup>3</sup> *Ibid.*

<sup>4</sup> “Waterworld Discovered Transiting Nearby Star,” *National Science Foundation* (Press Release 09-241).

<sup>5</sup> V. Damgov, “Some Reflections on the Notion of Quantavolution,” in I. Tresman (Ed.), *Quantavolution: Challenges to Conventional Sciences* (Knowledge Computing, 2010), p. 454.

<sup>6</sup> *Ibid.*, pp. 454-455.

And although there was a time when such dwarfs were believed to be entirely different from gaseous planets, astrophysicists are now struggling and arguing “over the specific differences between brown dwarfs and planets, especially about how and where they are born.”<sup>1</sup>

### CATASTROPHIC SIGNS WITHIN THE KUIPER BELT

The chaotic disarray of the bodies within the outer region of the Solar System known as the Kuiper Belt continue to give astrophysicists quite a headache. Among the thousands of bodies littering this belt, some are quite small, while others are “hundreds and even thousands of miles across.”<sup>2</sup>

“The discovery of the Kuiper Belt redrew our map of the solar system,” wrote the planetary scientist S. Alan Stern. “After all, the Kuiper Belt is the largest structure in the entire planetary system,” he went on. “It dwarfs the asteroid belt in scale, in mass, and in sheer numbers, and stretches more than twice the breadth of the giant planet region.”<sup>3</sup>

As already stated, proto-Saturn would have had to cross this region with Earth in tow on its way toward the Sun. As we have also noted, the probability is that it would have disrupted some of the bodies that lie within this belt. Signs of this disruption, as we have pointed out, remain quite evident to this very day. And this continues to astound those who have chosen to look deeper into this matter. As Stern continues to disclose, even if for reasons different than ours, “the orbital distribution of these bodies indicates that something has greatly disturbed the dynamics of the Kuiper Belt—and thus the orbits of the bodies in it.”<sup>4</sup> This explains why Kuiper Belt orbits “are mixed up and jumbled over one another.”<sup>5</sup>

One conclusion astronomers arrived at was that this disarray came about because the giant planets of the Solar System “had moved far from their birth locations” within the belt.<sup>6</sup> Or, as the theorist Hal Levison put it, the orbits within the belt “all but scream that the region had a close and violent encounter with at least one of the outer planets.”<sup>7</sup>

Having learned what we have, to us it seems more likely that the giant planets shifted in order to allow the intrusion of proto-Saturn. But not just the giant planets. Chiron (not to be confused with Charon) is only slightly over 100 miles wide. It now resides within the confines of the Solar System outside the demarcation of the Kuiper Belt. But it, too, is now believed to have originated *within* the belt from where it has been dislodged into a tighter orbit that wends between the planets Uranus and the very Saturn of our main interest.<sup>8</sup>

The shifting of bodies within the belt, to say nothing of the evicting of others out of it, is more likely to have required the invasion of a foreign body into the system. This invading

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<sup>1</sup> *Ibid.*, p. 455.

<sup>2</sup> S. A. Stern, “Secrets of the Kuiper Belt,” *Astronomy* (April 2010), p. 32.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, p. 33.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*, p. 34.

<sup>7</sup> R. Cowen, “Astronomers Look to the Kuiper Belt for Clues to the Solar System’s History,” *sciencenews.org* (January 16, 2010), p. 1.

<sup>8</sup> S. A. Stern, *op. cit.* p. 31.



body could very well have been our posited proto-Saturn. And, to be sure, the invasion of such a body has actually been considered. “The elongated, highly inclined orbits of many of the denizens in the doughnut-shaped Kuiper belt,” Levison concluded, “suggest that a massive intruder barged into the belt early in the history of the solar system, ejecting bodies and jumbling orbits.”<sup>1</sup> Such changes are “a smoking gun” that such an intruder “must have plowed into the Kuiper belt.”<sup>2</sup> Mike Brown is of the opinion that the “obvious suspect” is the planet Neptune.<sup>3</sup> Needless to say, we have reasons to think otherwise.

## ALIEN STARS

There are other theories floating around. In an earlier chapter of this very work we have seen how, on the one hand, some think of Chiron as being an escaped satellite of the planet Neptune,<sup>4</sup> while others consider it to be a comet in disguise.<sup>5</sup> If the latter is correct, Chiron’s ejection from the Kuiper Belt would have been in the form of an errant comet. As it turns out, there are many comets beyond Pluto’s orbit that have highly skewed paths of their own. What this has led to is the supposition that they were “stirred up by a star passing close by.”<sup>6</sup>

What the above implies is that stars, too, can be prone to erratic orbits. And why not, especially when it is realized that quite a few of the stars within our galaxy are actually interlopers. But never mind stars. How about entire stellar families?

“Many of our galaxy’s globular star clusters are actually foreigners—having been born elsewhere and then migrated to our Milky Way,” according to Duncan Forbes. “It turns out that many of the stars and globular star clusters we see when we look into the night sky are not natives, but aliens from other galaxies.”<sup>7</sup>

That the Milky Way had gobbled up other galaxies had already been known before Forbes made scientific headline news with the above disclosure while this book was being written. What was newly discovered was that “the Milky Way may have swallowed up *more* dwarf galaxies” than had been “previously thought.”<sup>8</sup>

## INTERLOPING PLANETS

If stars and even galaxies are now known to have invaded the Milky Way, what can be so surprising about an interloping planet? Is not the extrasolar planet known as HIP 13044b, together with its host star, now known to have been captured by the Milky Way from yet another

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<sup>1</sup> R. Cowen, *op. cit.*, p. 3.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> D. H. Levy, “Pluto’s New Little Cousin,” *Sky & Telescope* (February 2003), p. 92.

<sup>5</sup> W. Thornhill & D. Talbott, *The Electric Universe* (Portland, Oregon, 2007), pp. 86, 197.

<sup>6</sup> As reported by P. Clapham, *et al.*, “Catastrophic Comets,” in the “Monitor” section, *Chronology & Catastrophism Workshop* (2010:1), p. 22.

<sup>7</sup> “Alien Invaders Pack the Milky way,” *spacedaily.com* (February 24, 2010). p. 1.

<sup>8</sup> *Ibid.*, p. 2.

er galaxy?<sup>1</sup> Have we not ourselves posited that proto-Saturn, with Earth in tow, actually came from the Sagittarius dwarf galaxy that was likewise captured by the Milky Way?<sup>2</sup>

The very concept of such an event might also have been considered quite bizarre only a few decades ago, but not at present. Proto-Saturn aside, it continues to be announced that “the Sun, the Moon, our planet and its siblings, were not born into the familiar band of stars known as the Milky Way,” but actually came from the invading Sagittarius dwarf galaxy.<sup>3</sup> And while, for some strange reason, there are many within the scientific community who have chosen to contest this disclosure, it is not going to go away, as it has indeed been indicated by Mel Acheson. Due to certain factors which we do not really need to go into, Acheson has not only shown that such capture is evidenced by additional recent discoveries, but also that such discoveries supports the hypothesis that “the Sun captured a previously independent Saturnian system” that included Earth.<sup>4</sup>

That none of this transpired millions of years ago as maintained by most astronomers is indicated by what our ancient forebears had to say about the planets. In fact, planetary orbits within the Solar System continued to be altered, even if only slightly, well into historical times. Despite his difference of opinion when it comes to Earth’s cosmic past as outlined in these very pages, Marinus van der Sluijs could still write that: “Indeed, the limited set of information conveyed by ancient scientists includes some very credible indications that planetary orbits did shift within the space of human history.”<sup>5</sup>

### EARTH’S NORTHERN HERITAGE

Recent discoveries that continue to lend credibility to our unfolding series of hypotheses have not only come from the realms of astronomy. Earth itself continues to bear witness since signs of what it underwent throughout its catastrophic history have not all yet disappeared.

Further evidence of early life in Earth’s north polar regions came to light through additional discoveries of microscopic fossils at Mount Slipper, north of Dawson City, close to the Yukon-Alaska border. These fossils contain what has been claimed to be “the earliest traces of animal life.” The site is now considered to contain “an important new record of ‘eukaryotic evolution’ —the branch of life that eventually gave rise to humans and all other animals.” This places the area at “a crucial time” in Earth’s history, when primitive, unicellular forms of life were beginning to evolve into more complex structures.<sup>6</sup>

A team of British and Canadian paleontologists has also reported the discovery of “the oldest evidence of animal locomotion” in a fossilized track of an unidentified marine creature.

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<sup>1</sup> R. Cowen, “It Came From Another Galaxy,” *sciencenews.org* (December 18, 2010).

<sup>2</sup> See back to pages 97 ff. & 191 this very work.

<sup>3</sup> D. Eden, “Scientists Now Know: We’re Not From Here!” *viewzone2.com* (January 1, 2011).

<sup>4</sup> M. Acheson, “Stars in Collision Part I” and “Stars in Collision Part 2,” *Chronology & Catastrophism Workshop* (2010:1), pp. 35-37.

<sup>5</sup> M. (Rens) van der Sluijs, “Joining the Dots—Part Two: The Dating in the Sky,” *Chronology & Catastrophism Workshop* (2009:3), p. 29.

<sup>6</sup> R. Boswell, “Mount Slipper Fossils Among Earliest Animals,” *Canwest News Service* as reported in *The Vancouver Sun* (February 10, 2010), p. B2.

This also came from one of Earth's northern extremities in Newfoundland.<sup>1</sup>

Additional reports from a team of scientists from the United States and Canada tell of chemical traces which point to the one-time existence of a "sponge-like organism—possibly the oldest evidence of an animal ancestor ever found on earth." And this, too, comes from Earth's north polar regions in the Mackenzie Mountains close to the border between Yukon and the Northwest Territories.<sup>2</sup>

After everything we have documented about the dating methods at our disposal, there would be no point in being concerned with the millions of years that have been allotted to the above fossils or to any of those which follow. One matter I will definitely stress, however, is that such early life could not have thrived, let alone originated, in the regions these fossils have been found had these regions been as frigid as they are now.

Yes, there have been voices raised against all this. Thus, a 400-meter-long core of sediment that was recovered close to the north pole in June 2006 indicated that the region had definitely basked in a subtropical climate some 55 million years ago. The same area was however claimed to have subsequently been driven into freezing temperatures five million years later.<sup>3</sup> But, as Andrew Revkin noted, the "centerpiece" of this argument happens to be "a single pebble, *about the size of a chickpea*, found in a layer" that was supposedly laid down 45 million years ago.<sup>4</sup> The pebble, according to Kathryn Moran, who then hailed from the University of Rhode Island, "could have been deposited...only if it had been carried overhead in ice"—in other words an iceberg. This was such slim, not to say lame, evidence from which to draw such a wide-ranging conclusion that there were those who felt they had to raise their voice against it. Among them was Julie Brigham-Grette, from the University of Massachusetts, an expert in paleo-Arctic climates, "who cautioned against giving too much significance to the single sample, and particularly the single stone [read 'pebble'] from 45 million years ago."<sup>5</sup> As she also pointed out, other evidence clearly indicates that Arctic coasts were still basking in a warm climate as recently as 2.4 million years ago.<sup>6</sup>

Others may claim, as some already have, that, due to continental drift, what is now Earth's Arctic region had earlier been located farther south, thus accounting for the warmth-loving species the signs of which are now discovered way up north. But that is really a misconception. Geological fieldwork, as Ian Johnson noted at the turn of the century, has confirmed that the *present* northern lands of the globe "have been located in polar latitudes *for at least the last 100 million years*, despite ongoing continental drift."<sup>7</sup> More than that, these polar latitudes seem always to have been much warmer than they are at present. Even at the dawn of the Mesozoic era, which has been dated to 250 million years ago, Earth's poles were free of

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*

<sup>3</sup> A. C. Revkin, "Studies Portray Tropical Arctic in Distant Past," *nytimes.com* (June 1, 2006), p.1.

<sup>4</sup> *Ibid.*, p. 2 (emphasis added).

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*; see also, "Arctic Climate Switched from Greenhouse to Icehouse, Cores Show," *CBC.CA News* (June 1, 2006)].

<sup>7</sup> I. C. Johnson, "Anomalous Occurrence of Crocodilia in Eocene Polar Forests," *Chronology and Catastrophism Review*, XIV (1992), p. 8 (emphasis added).

ice,<sup>1</sup> as they also were earlier still during the Devonian period, dated at close to 400 million years ago.<sup>2</sup> During that time, the Arctic regions were not all that much different than at present. In fact, give or take a little, the lands surrounding what is now the Arctic Circle have not moved much since about 200 million years ago.<sup>3</sup> And if one wishes to split hairs, I can do just as well by pointing out that, even around the above mentioned 400 million years, the same area was still located in Earth's north polar region.<sup>4</sup> In fact, let's face it, as it has been noted by most glaciologists of worth, the north polar regions, together with the rest of our world, have "enjoyed uniformly warm, equable climate" for most of Earth's history.<sup>5</sup> It is not that continents have not shifted, but as far as the north polar regions are concerned, the lands around what is now the Arctic mainly moved through a relative slight rotation about a fulcrum that was centered close to what are now the New Siberian Islands.<sup>6</sup>

Although the accuracy of the supplied dates may be questioned, we keep them in mind as an approximate value when we look at the discoveries of further fossils on Ellesmere Island, in the same north polar region, which have been classed as belonging to the Eocene epoch, dated to some 50 million years ago. "These unique, world-renowned sites near Strathcona Fiord," the Society of Vertebrate Paleontology reported, "include fossil plants and animals that lived during one of the warmest times in all of Earth history, when Ellesmere Island was blanketed in forests inhabited by alligators, turtles, primates and hippo-like animals."<sup>7</sup>

Some of these beasts were represented by sets of fossilized teeth, all of which were retrieved from what has been described as "the island's ancient tropical environment."<sup>8</sup> These mammals, it has been ascertained, did not migrate or hibernate, but lived in the High Arctic "all year long."<sup>9</sup> They lived in a region that has been compared to the "swampy cypress forests in the southeast United States today," a region that continues to "contain fossil tree stumps as large as washing machines."<sup>10</sup>

Between 2008 and 2010, the above site led to what has been described as a "battle between fossil fuel and fossil science." This came about because of a proposal by a certain Vancouver-based corporation that was seeking coal-mining rights in the area. While paleontologists registered their deep concern over the possible loss of these valuable fossils, the presi-

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<sup>1</sup> J. J. Flynn & A. R. Wyss, "Madagascar's Mesozoic Secrets," *Scientific American* (February 2002), pp. 56-57.

<sup>2</sup> E. S. Barghoorn, "Evidence of Climate Change in the Geologic Record of Plant Life," in P. Cloud (Ed.), *Adventures in earth History* (San Francisco, 1970), p. 737.

<sup>3</sup> R. S. Dietz & J. C. Holden, "The Breakup of Pangaea," in *Continents Adrift* (San Francisco, 1972), p. 106.

<sup>4</sup> P. M. Hurley, "The Confirmation of Continental Drift," in *ibid.*, p. 65; see also F. H. Knowlton, "Relations of Paleobotany to Geology," *Smithsonian Institute Annual Report* (1912), as quoted in D. E. Hooker, *Those Astounding Ice Ages* (N. Y., 1958), p. 43.

<sup>5</sup> E. H. Colbert, "The Record of Climate Changes as Revealed by Vertebrate Paleontology," in H. Shapley, *Climate Change* (Cambridge, 1953), p. 269.

<sup>6</sup> J. T. Wilson, "Continental Drift," in *Continents Adrift* (San Francisco, 1972), p. 51.

<sup>7</sup> R. Boswell, "B.C. Mine Exec Reaches Out to Scientists," *Canwest News Service* as reported (January 25, 2010).

<sup>8</sup> R. Boswell, *loc. cit.*

<sup>9</sup> University of Colorado at Boulder News Web, *loc. cit.*

<sup>10</sup> *Ibid.*, p. 2.



dent of the mining corporation insisted that mining would actually facilitate the recovery of fossils as in fact transpired in the Klondike where the search for gold nuggets, during a period of 113 years, resulted in a wealth of rare fossil specimens.<sup>1</sup>

Coal-mining aside, it was then reasoned that, because the oldest-known tapir fossils come from this area, “there is the possibility that some prehistoric mammals could have evolved in the circumpolar Arctic and then dispersed through Asia, Europe and North America” rather than the other way around.<sup>2</sup> Unfortunately this led to the conclusion, at least by some, that these very same Arctic regions had always been burdened with recurring winters even if such winters had been mild. The mammals whose fossilized remains have been found in these areas were thus believed to have “endured six months of darkness each year.”<sup>3</sup> It is not told how “swampy cypress forests” could have survived a series of recurring six months of darkness, which could hardly have been warm, for a period that would have lasted thousands of years.

John Tarduno, from the University of Rochester, does not believe in these recurring six months of Arctic darkness. As far as he is concerned, “the Arctic Ocean was warm and ice-free” *all year-round*.<sup>4</sup> In 2006, while trudging through the island of Axel Heiberg, just west of Greenland, a member of his Arctic expedition discovered the “amazingly well preserved shell” of a 90-million-year-old turtle that “strongly resembles a freshwater Mongolian species.” Now named *Aurorachelys*—i.e., Aurora Turtle—the newly discovered reptile could only have thrived in what Tarduno has described as “extremely warm, ice-free conditions in the Arctic region.”<sup>5</sup> As reported by the University of Rochester:

“Tarduno’s paleomagnetic expertise, which allows him to ascertain when points on Earth’s crust were at specific locations, *allows him to rule out the possibility that millions of years of tectonic activity had brought the fossil from southern climes*. The turtle was clearly a native of the area.”<sup>6</sup>

Tarduno was thus driven to suggest that “the warming may have been caused by volcanoes pumping tremendous amounts of carbon dioxide” into Earth’s atmosphere.<sup>7</sup> But, as he also noted, there is “evidence that this volcanic activity happened all around the planet—not just the Arctic.”<sup>8</sup> That, however, was as far as he could go. Not knowing where else to turn, he remained strangely silent when it came to what could have caused such volcanic activity all over the world.

Ellesmere Island, which is one of Earth’s northernmost landmasses, seems to have no end of surprises. Forests, apparently, continued to grow between ten and two million years ago in

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<sup>1</sup> R. Boswell, *loc. cit.*

<sup>2</sup> University of Colorado at Boulder News Web, *loc. cit.*

<sup>3</sup> *Ibid.*, p. 1.

<sup>4</sup> M. Wall, “Tropical Turtle Fossil Discovered in the High Arctic,” *Wired Science* at *blog.wired.com* (February 1, 2009), p. 1.

<sup>5</sup> “Ancient Turtle Migrated from Asia to America Over a Tropical Arctic,” *physorg.com* (February 1, 2009), p. 1.

<sup>6</sup> *Ibid.* (emphasis added).

<sup>7</sup> *Ibid.*, p. 2.

<sup>8</sup> *Ibid.*

what is now a dry, frigid, treeless site that is surrounded by glaciers all year round. The mummified remains of this forest include well-preserved logs, leaves, and seed-pods from such trees as pine, birch, and spruce. The trees, it has been suggested, “were likely preserved” because “they were buried quickly by landslides and thus protected from air and water, which hastens decomposition.” The logs in Quttinirpaaq National Park, many of which are several feet in length, are so numerous that one can hardly cross some areas without tripping over them. Joel Barker, from the Ohio State University, was offering nothing new when he compared the mummified forest to ones “growing hundreds of miles to the south,” which suggested that the ancient forest “must have grown during a time when the arctic was much warmer.”<sup>1</sup> And on it goes. But never mind animals and the forests in which they lived. How about human beings?

### ARCTIC SETTLERS

The presence of early man in Arctic regions, especially in Siberia, is a subject that has been debated since the middle of the nineteenth century. Such presence has been accepted by some and contested by many others. Some had even gone so far as to claim that “Siberia, or the Far North in general,” had been the actual “cradle of mankind.”<sup>2</sup> As time went by, however, lack of solid evidence resulted in an ever-diminishing number of believers. Those who held on kept on looking and digging, but what they found did not always convince their detractors.<sup>3</sup> In that respect, not much has changed. And yet, worked tools continue to be discovered in areas where, at present, it is definitely too cold for tribal populations to exist in comfort. But even then, the objects in question are so crude that many refuse to see them as the handiwork of human beings. Nevertheless, there *are* exceptional cases.

One of the most important of these Siberian sites is that of Diring-Ur’akh on the Lena River north of Yakutsk in Yakutia. Excavations on the terrace of this river have uncovered human burials in stone coffins that have been dated to 1500 B.C. It is evident, however, that these burials had been dug through much older Paleolithic deposits and, below that, further sites have been uncovered, some of which have been dated to 2 million years ago. Because pieces of worked stone from these deeper layers could still be fitted together, it was clear that the crudely fashioned tools were actually made at the site and not brought from elsewhere. What this additionally indicated is that those responsible for the manufacture of these artefacts had probably belonged to a sedentary, rather than a roving, way of life. It was this, more than anything else, that converted the archaeologist Yuri Mochanov, who had originally been a skeptic, “to the notion of a very early occupation of the Far North.”<sup>4</sup>

Why would such early human beings have settled in Siberia had it been as freezingly cold as it is at present? This problem did not much bother Mochanov, or his associates, since it was obvious that, for whatever reason, such a settlement *did* take place. There seemed to be no point in arguing why. What did bother them was *how* such early human beings managed to

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<sup>1</sup> M. Inman, “Mummified Forest Found on Treeless Arctic Island,” *news.nationalgeographic.com* (December 17, 2010), pp. 1-2.

<sup>2</sup> R. Rudgley, *The Lost Civilizations of the Stone Age* (N. Y., 2000), p. 248.

<sup>3</sup> *Ibid.*, p. 249.

<sup>4</sup> *Ibid.*, p. 250.

survive in such extremes. As it has been argued, it is clear that “this part of the world could not have been populated by early humans unless they had the ability to make (or at least preserve) fire and were sufficiently advanced to have made themselves fur clothing.”<sup>1</sup> But while the domestication of fire by early man has been traced to over one million years ago, there is no evidence that it had been used *in Siberia* during the much later Paleolithic. Siberian sites that have been dated to even later times had already run headlong into that quandary. “Most archaeologists,” it has been reported, “simply do not believe that humans—even 200,000 years ago—were capable of colonizing the harsh natural environment of the Far North because they were not advanced enough to control fire and make themselves clothes.”<sup>2</sup>

While the above remains highly controversial, in our own scheme the problem is not even raised. With the proto-Saturnian sun having shone above these regions from its immobile location in Earth’s north celestial pole, early humans in Siberia would not have needed fire or fur clothes to keep them warm—which is why neither the remains of clothes nor ashes have ever been discovered in these regions from such an early age.

## COSMIC FALLOUT

Cosmic dust continues to be implicated in the inception of the Younger Dryas. Elevated levels of helium-3 in sediments associated with this event have been attributed by Paul LaViolette “to a sudden influx of a large amount of cosmic dust.”<sup>3</sup> As he also indicates, Earth is still “surrounded by a dust cloud” that extends “radially outward” for a few thousand miles.<sup>4</sup>

LaViolette is also of the opinion that the mass extinctions of the Pleistocene had to have had a solar cause.<sup>5</sup> According to him, several studies “indicate that toward the end of the ice age the Sun was far more active than it is today.”<sup>6</sup> Citing the works of H. A. Zook and others, he presents evidence from the “tracks” that solar flares are said to have etched in lunar rocks, indicating that, around that time, “the average solar cosmic ray intensity was 50 times higher than at present,” which intensity then started to decline until it reached the current level.<sup>7</sup>

This was not exactly new. As already noted, analyses of the lunar rocks recovered by the Apollo astronauts had already led to the assumption that Pleistocene fauna had succumbed to intense cosmic ray bombardment. Rather than LaViolette’s more energetic Sun, however, the source of the bombardment was theorized to have been a supernova.<sup>8</sup>

LaViolette is not alone in this. To an extent, van der Sluijs also agrees. According to him, the events in question “can be explained on the hypothesis of a solar storm of unprecedented

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*

<sup>3</sup> P. A. LaViolette, “Evidence for a Solar Flare Cause of the Pleistocene Mass Extinction,” *Radiocarbon* (June 1, 2011), p. 304.

<sup>4</sup> *Ibid.*, p. 319.

<sup>5</sup> *Ibid.*, p. 304.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> D. Krotz, “Supernova Explosion May Have Caused Mammoth Extinction,” Lawrence Berkeley Laboratory Research News at [lbl.gov/Science/Articles/Archive/NSD](http://lbl.gov/Science/Articles/Archive/NSD) (September 23, 2005), p. 1.

proportions, provoking intense geomagnetic disturbances and near-lethal synchrotron radiation emitted by magnetospheric plasma, possibly in combination with a cometary interloper.”<sup>1</sup>

The telltale signs of this bombardment are indisputable. What remains debatable concerns its source—a supernova or an overactive solar orb. In our scheme, the flare-up from the brown dwarf star that had been acting as Earth’s primordial sun just as readily accounts for the accumulated evidence. As we have also indicated, even though we still maintain our lunar neighbor had not yet been captured in terrestrial orbit, it would still have been bombarded by intensive cosmic rays had it not been too far away from Earth.

## MAN ON THE MOVE

The Clovis people’s reputation of having been the first wave of infiltrators to settle in the Americas is under severe attack. Fossilized human feces dated to 14,000 years ago, which thus predate the Clovis era, have been discovered in an Oregon cave.<sup>2</sup> Additional to that, thousands of stone artifacts have been found littering an ancient settlement, dated to 15,000 years ago, that has come to light in central Texas.<sup>3</sup> There are those who believe that seafaring people from Asia “must have used skin boats” to navigate between ice-free waters along the Pacific Coast of Alaska and British Columbia “at least 16,000 years ago.”<sup>4</sup> Anthropologists from the University of Utah have shoved this date even farther back in time by proposing that “the original peopling of the Americas might have begun more than 20,000 years ago from Central Siberia, across the Arctic Ocean, via Canada’s High Arctic Islands.”<sup>5</sup> All of which is in keeping with genetic evidence that definitely points to “a much earlier arrival of humans in the Americas than previously believed.”<sup>6</sup>

For reasons we have already supplied in earlier pages of this work, the above dates have been rounded off from the ones supplied by those involved in these theories and discoveries. And even then these rounded figures are at best a reasonable average. What is of greater importance is that the evidence does not only indicate an earlier migratory trend into North America, but the greater feasibility of such migrations via different means than had earlier been believed. How many survivors from these different societies managed to merge and blend with others at the termination of the Younger Dryas is now difficult to ascertain. But the changes that affected them following the end of that period keep receiving further validation.

The mining of iron oxide for the production of the coloring medium known as ochre had been going on by ancient man in various localities around the world. Signs of such activity that have been dated between 350,000 and 400,000 years old have come to light at Wonderwerk Cave in South Africa.<sup>7</sup> The site at Terra Amata in France, where ochre has also been

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<sup>1</sup> M. (Rens) van der Sluijs, “Bad to the Bones.” *thunderbolts.info* (August 30, 2010).

<sup>2</sup> R. Boswell, “Texas Findings ‘Death Blow’ to Clovis Theory,” Postmedia News in *The Vancouver Sun* (March 25, 2011), p. B1.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

<sup>7</sup> R. Rudgley, *op. cit.*, p. 176.



found together with Acheulian tools, goes back to 300,000 years ago.<sup>1</sup> The oldest mine in the Americas, which has recently been discovered near the coastal town of Taltal in northern Chile, is much younger, but it bears special significance to our developing work. According to the archaeologists involved in this discovery, an estimated 700 cubic meters, containing 2,000 tons of rock, have been extracted from this mine. More than 500 hammering stones that were used for this extraction from the earliest use of the mine have also been unearthed.<sup>2</sup>

What seems clearly indicated is that the mining operation at this site constituted a labor-intensive activity that demanded technical skills and a fair amount of social co-operation that must have lasted for generations. This was implied by the carbon-derived dates of the charcoal and shells that were found in association with the mine, which dates range from 12,000 to 10,000 years ago.<sup>3</sup> These, too, are rounded averages that should also be used with caution, especially since radiocarbon testing of comparable samples conducted by separate laboratories have resulted in different dates, not to mention other discrepancies.<sup>4</sup>

We do, however, note that mining at this site came to an end around that last given date, which coincides with our benchmark figure for the end of the Pleistocene Ice Age. In view of the catastrophic events that accompanied this event, the cessation of mining activity is understandable. And while, as we keep harping, we hate to jump ahead, the same site seems to have been rediscovered and mined again around 4,000 years ago,<sup>5</sup> which comes rather close to coinciding with the end of the proto-Saturnian era during which Earth commenced on its long period of stabilization.

## TERRESTRIAL READJUSTMENTS

In actual fact, Earth has not yet settled down from its past series of catastrophic disturbances. I will not here mention those ancient cities that are now under the sea due to the sinking and/or tilting of land areas.<sup>6</sup> Yes, lands continue to rise and fall. But they also split apart. Take the spreading of the continental plates in the Afar Triangle in northeastern Ethiopia. The pulling apart of these plates is slowly opening up a breach that will eventually be flooded by the waters of the Red Sea. The widening of the fissure that is being created has been calculated to be taking place “at up to 12 centimeters per year.”<sup>7</sup> This might not seem to be much, and, in a way, it really isn’t. There are times, however, when sudden jolts accelerate the widening, amplifying the catastrophic disruption of the surrounding strata. One such jolt took place between September and October of 2005 when a 60-kilometer-long stretch of rock was torn

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<sup>1</sup> *Ibid.*

<sup>2</sup> D. Salazar, *et al.*, “Early Evidence (ca. 12,000 BP) for Iron Oxide Mining on the Pacific Coast of South America,” *Current Anthropology* (June 2011), pp. 463-475.

<sup>3</sup> *Ibid.*

<sup>4</sup> See, for instance, C. Perles, *The Early Neolithic in Greece* (Cambridge, 2001), pp. 90, 108, 109

<sup>5</sup> D. Salazar, *et al.*, *op. cit.*

<sup>6</sup> See here, for example, D. Moore, “Crete, the Island that Tipped,” *Current World Archaeology* (December 2009-January 2010), pp. 39-44.

<sup>7</sup> D. Biello, “Satellite Captures Creation of New Continental Crust,” *scientificamerican.com* (July 20, 2006).

apart, widening the breach “by as much as eight meters.”<sup>1</sup> Magma from nearby volcanoes then flowed into the newly created rift, thrusting up “a dyke of roughly 2.5 cubic kilometers—twice as much material as erupted from Mount St. Helens—more than two kilometers below the surface.”<sup>2</sup>

The splitting apart of the above area has been the one that has generated the most attention. But there are others. A 3-kilometer long crack, 100 meters wide, appeared quite suddenly in Puno, southern Peru, without an accompanying earthquake to give it birth.<sup>3</sup> In Iceland, an entire lake started draining into a newly formed crack in the earth.<sup>4</sup> And that’s to name only a few. A cursory surf through the Internet will easily reveal other examples.

## THE EMERGENCE OF RELIGION

The changes that most affected our ancestors at the end of the Ice Age and the events that followed the Younger Dryas, however, were those that took place within their own intellect. Prime among these was the embryonic emergence of religion. While, with others, Richard Rudgley places the inception of the Neolithic period at our benchmark date of 10,000 years before the present, he traces man’s “artistic and religious awareness” to an earlier period, “40,000 years or so ago.”<sup>5</sup> What we accept, however, is that man’s artistic nature developed long before he formulated any concepts that could be called religious. What we have been able to extract from the mytho-historical record does not allow us to push religious concepts beyond our benchmark figure.

There will be those who will point to the production of ochre, said to have been utilized in religious practices, far ahead of 10,000 years ago. Yes, as we have already seen, ochre *had* been developed earlier than that. It should, however, be kept in mind that this coloring agent was not always, and/or strictly, used for religious purposes. Besides its utilization as a painting medium, as Rudgley himself pointed out, “ochre may have been used in the treating of animal skins and hides in order to make some rudimentary form of clothing or bedding.”<sup>6</sup> The Australian Gugadja continue to use it as a medicine, which is not surprising since ochre contains antiseptic qualities and can be used to staunch bleeding.<sup>7</sup> Even its use as body coloring must not necessarily be seen as having been symbolic. We know from existing tribal people, such as the African Himba, that the rubbing of ochre on one’s body can be used “to repel insects and provide protection from the sun.”<sup>8</sup>

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*; see also, M. Campbell, “Giant Crack in Africa Formed in Just Days,” *newscientist.com* (November 4, 2009).

<sup>3</sup> “Large Crack Opens in the Earth in Southern Peru,” *Signs of the Times* (February 25, 2011).

<sup>4</sup> B. P. Trivedi, “Iceland Lake Disappearing Into New Crack in Earth,” *nationalgeographic.com/news* (October 1, 2002).

<sup>5</sup> R. Rudgley, *op. cit.*, p. 11.

<sup>6</sup> *Ibid.*, p. 177.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

Rudgley is also of the opinion that man's acquisition of religion preceded his development of agriculture.<sup>1</sup> This is in keeping with the newest shift in anthropology, especially as brought to bear with the archaeological discoveries at Çatal Hüyük and, more recently, at Göbekli Tepe, both in present-day Turkey.<sup>2</sup> This last mentioned site contains a megalithic structure that is presently believed to be the oldest religious temple that has so far come to light. It has been dated by Klaus Schmidt, its excavator, to 11,600 years ago.<sup>3</sup> To us, this seems a little bit too early, but let it be for now.

Religion is additionally seen by some as having been the very basis of civilization.<sup>4</sup> As always, however, opinions differ. Some have even taken a middle course. "In one place agriculture may have been the foundation," Charles Mann found reason to report, "in another, art and religion."<sup>5</sup>

To Rudgley, civilization is much older than most authorities would be willing to admit,<sup>6</sup> but this depends on what one means by "civilization." If civilization is meant to incorporate any form of institutional or civil law, no matter how primitive in origin, civilization could hardly be said to have developed before settlement, which, in turn, is usually believed to have preceded farming.<sup>7</sup>

If we have been following the right track, other than what dreams might have instigated in human minds, man would originally have found nothing in nature that would have led him to believe in gods, whatever his first concepts of such entities might have been. Never mind the anthropomorphization, or deification, of thunder and lightning, hurricanes and such. As far as we can tell, even such occurrences would have been kept at a minimum beneath the static atmospheric regime that existed within proto-Saturn's encasing plasmasphere. Judging by what we find encoded in mankind's mytho-history, the belief in an omnipotent being was the direct result of the catastrophic changes that were instigated by proto-Saturn's flare-up. It was due to that event that mankind commenced to endow heavenly bodies with intention and long lasting lives. Nor is this merely our contention. As Mann recently pointed out, organized religion came about in response to "a common vision of celestial order."<sup>8</sup>

What Mann could not have known is that this "celestial order" was what followed proto-Saturn's chaotic outburst. It was, in fact, what mankind was to remember as the Creation. It is unfortunate that the manner in which this event was reported by those who witnessed it was to be misunderstood by those who came much later. In simpler words, it was eventually forgotten what it was that God had actually created.

As we pointed out at the very end of our previous volume, God gave birth to a daughter.<sup>9</sup> As some have said, she was actually born at the very shedding of God's light. But God kept

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<sup>1</sup> *Ibid.*, p. 11.

<sup>2</sup> C. C. Mann, "The Birth of Religion," *National Geographic* (June 2011), p. 57.

<sup>3</sup> *Ibid.*, p. 39.

<sup>4</sup> *Ibid.*, p. 40.

<sup>5</sup> *Ibid.*, p. 58.

<sup>6</sup> R. Rudgley, *op. cit.*, *in toto*.

<sup>7</sup> C. C. Mann, *op. cit.*, p. 56.

<sup>8</sup> *Ibid.*, p. 57.

<sup>9</sup> *Primordial Star*, p. 358.

her hidden for a while until a proper place for her had been created. And that was more or less what God's Creation amounted to, a simple, even if radiantly glorious, celestial enclosure. This is so contrary to most existing religious beliefs that it is bound to rile even some of my most ardent readers. It cannot, however, be stated all that simply. There is an abundance of evidence that needs to be surveyed and critically assessed. So let me end this treatise the same way I ended its three prequels by asking my readers to stay on board with me. I still have much to offer.



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## ABOUT THE AUTHOR

Dwardu Cardona was born, raised, and educated in Malta, Europe, from where he emigrated to Canada in 1959. Less than a year later, in mid-1960, he became involved in the study of catastrophism and the reconstruction of the Solar System's cosmic history. He has since then acted as a Contributing Editor for *KRONOS* (1975-1978) and, later, as a Senior Editor for the same periodical (1979-1988) and, later still, as the Editor for *AEON* (1995-2006). He was one of the Founding Fathers behind the Canadian Society for Interdisciplinary Studies (now defunct), and has acted as a consultant on mythology and cosmogony for *Chronology and Catastrophism Review*, the official organ of the British-based Society for Interdisciplinary Studies. He has also acted as the Editor for the Osiris Series of books sponsored by Cosmos & Chronos.

As a writer, Cardona has now published well over a hundred articles in various periodicals, most of them on the subject that is covered in more detail in his present series of books: *God Star* (2006), *Flare Star* (2007), and *Primordial Star* (2009), which actually form the prequels to the present work.

He has additionally lectured at the University of Bergamo, in Italy, and at various organizations in England, Canada, and the United States.

He presently makes his home together with his wife in Vancouver, British Columbia, Canada.

**T**he so-called Clovis Comet that supposedly re-cooled Earth during the event of the Younger Dryas that followed the warming spell at the end of the Pleistocene Ice Age ended up capturing the imagination of both scientists and laymen during the first decade of the twenty-first century.

While the present work has much to offer concerning the real cause of that occurrence, it is prefaced with additional evidence in favor of the theoretical model advanced in its three prequels\* in which it is argued that the primordial Earth had basked beneath a different sun than the one that presently shines above us.

This previous sun is there shown to have been a sub-brown dwarf that, together with Earth in tow, had been wandering freely through space before it was captured into the confines of the Solar System where, in time, it devolved into the present gaseous planet Saturn.

The terrestrial devastation that transpired in conjunction with the younger Dryas decimated our Paleolithic ancestors, even while exposing the survivors to the phenomenal emanations that were transforming the sun above them. It was their endeavor in trying to understand what was transpiring above their heads that finally led them to endow their brown dwarf star with indomitable life.

The fear that the upheaval instilled in them, together with their attempt to placate its heavenly source, is what led our ancestors to ritual pacification in their long climb toward a hope-filled faith that ended in religion.

Stated so briefly, the above disclosures are bound to evoke adverse reactions among those of a scientific disposition. Those among them who are prepared to investigate new grounds, however, will discover much to activate their minds in the detailed deliberations presented between the covers of this work.

*\*God Star (2006), Flare Star (2007), Primordial Star (2009)*

